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Western Irrigation Agriculture

Vol. 14

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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES.

Umatilla.

During the week ending June 1, the maximum temperature was 87, minimum 32 and precipitation 0. The low temperatures did not do any material damage.

The rye on field Clc was cut instead of being turned under that the straw might be saved to cover the new work proposed for next winter. The rye and vetch in fields D1 and D5 was cut to prevent the vetch going to seed and thus interfere with the new plantings next year and also to supply straw.

As much of the rye as possible was cut out of the vetch in field C2 where the vetch will be cut for seed. It is very difficult to separate the rye and vetch seed so an attempt was made to get rid of the rye by cutting it first.

During the week ending June 8, the maximum temperature was 95, and minimum 37.

Field stakes were printed and set for the corn plantings, pasture grasses and forestry and ornamental nursery.

Considerable reseeding was necessary in the distance of planting of corn experiment in field Cl. The poor stand was partially due to the pheasants eating the young corn and partially to the soil not being moist enough at planting time.

During the week ending June 15, the maximum temperature was 101, minimum 42, and precipitation .06 inch.

The first crop of hay was cut during the week. The crop was much better than was expected. The hot weather of the ten days before the crop was cut added to the yield materially.

The Chinese pheasants, which were introduced onto the project about 5 years ago, are doing a good deal of damage to the corn planted on the project this year. The pheasants pull up the corn when it is three or four inches high and eat the seed. On some farms the stand is reduced as much as 50 per cent. A cooperative experiment with three farmers has been started in an attempt to control them. Seed was treated with various substances to see if the pheasants would leave it on account of its bad taste. Black leaf 40, crude oil, sheep dip, and pine tar have been used.

During the week ending June 22, the maximum temperature was 103, minimum 42 and precipitation .03 inch.

The alfalfa in which grains were sown as a supplemental crop was cut during the week. The alfalfa was very good but the grains did not do well probably on account of the cold spring. The yield results will be sent in later.



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WESTERN IRRIGATION AGRICULTURE  
Field Notes

Umatilla (continued).

The corn and row crops were cultivated and hoed. The vetch was hoed from around the grapes.

Truckee-Carson.

During the two weeks ending June 22, all plats were irrigated, the corn and mangels cultivated, and part of the ditch banks mowed with a scythe. The alfalfa on fields D and H was mowed but frequent small rains made it necessary to leave the hay in the cock.

Four varieties of beans were planted in field A1: Mexican, Tepary, Lady Washington and Navy.

Many of the new plats in field B contain a soil very difficult to work and unsuitable for crop growth. This soil contains a relatively large amount of sand but when dry it cements over the top, forming a crust through which young plants cannot emerge and which cannot be broken up in any manner by the use of farm machinery after the crop is planted.

An experiment designed to test various methods of improving this soil has been planned with the assistance of Mr. Farrell, to be tried on B9 and 10. The other plats are to grow grain and sweet clover until further plans are decided on.

The plan for plats B9 and 10 is as follows:

- 1 Check
- 2 Gypsum . . . . . 4 tons per acre.
- 3 Gypsum . . . . . 1/2 " annually.
- 4 Sulfur . . . . . 1/2 " per acre
- 5 Sulfur . . . . . 250 pounds annually
- 6 Check
- 7 Manure. . . . . 25 tons annually
- 8 Manure. . . . . 50 " annually
- 9 Manure. . . . . 100 " annually
- 10 Manure . . . . . 50 tons annually with 1/2 ton gypsum
- 11 Check
- 12 Manure . . . . . 50 tons per acre with sulfur.
- 13 Manure . . . . . 50 " " " and subsoiled.
- 14 Gypsum . . . . . 1/2 ton " " and subsoiled.
- 15 Sulfur . . . . . 250 pounds per acre and subsoiled.
- 16 Check.
- 17 Subsoil.
- 18 Subsoil. Gypsum 1/2 ton. Manure 50 tons.
- 19 Subsoil. Sulfur 250 pounds. Manure 50 tons.
- 20 Check.



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, WESTERN IRRIGATION AGRICULTURE  
Field Notes.

Yuma.

During the week ending June 22, the maximum temperature was 110, minimum 69 and greatest daily range 35.

Seventeen acres were irrigated. The third cutting of alfalfa, totaling 23 acres, was harvested during the week. Beans, on C35, and variety planting of potatoes on Al4-1 was also harvested.

C20 was seeded to Rhodes grass. Five nursery plats, four and one-half acres of cotton, and one acre of velvet beans were cultivated, and three acres of dates were disked.

Field stakes were cut and painted. The usual amount of hoeing was accomplished. Three tons of milo for feed were delivered from Winterhaven.

San Antonio.

During the week ending June 22, the maximum temperature was 103, minimum 68, and greatest daily range 32. The total precipitation, which came as one shower on Sunday afternoon was one inch.

The principal field work was cultivating and weeding. Cotton in the rotation experiments and on miscellaneous fields was cultivated. Corn in the rotation experiments and on miscellaneous fields was cultivated. Sorghum in four foot rows and all orchards were cultivated. Corn in the rotation experiments was weeded. Sudan grass on the rotation plats was cut the last part of the week. Soil samples were taken on the sorghum plats in the rotation experiments.

Mr. Hastings of Sacaton, Arizona, spent several days at the station the first part of the week.

Belle Fourche.

Irrigating of all the grains was finished during the week ending June 22, and the forestry very nearly completed. The alfalfa in field A was cut, raked and shocked, and all alfalfa on the dry land has been harvested. The thinning of beets was commenced during the week and is about one-third completed. The corn and potatoes were cultivated both on the irrigated and dry land. The month has been hot and dry and small grains on the dry land are drying up.



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Field Notes

PUBLICATIONS

The following publications of the Office of Western Irrigation Agriculture have been issued recently:

"The Growing of Grain Sorghums in the San Antonio District of Texas". By C. R. Letteer. Farmers Bulletin No. 965.

"The Work of the Yuma Reclamation Project Experiment Farm in 1916". By R. E. Blair. W. I. A. Circular No. 20.



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DEMONSTRATIONS ON RECLAMATION PROJECTS

FIELD NOTES.

Minidoka.

Preliminary to the trailing north of the four bands of sheep in the cooperative association, the trail between the project and the Sawtooth Forest was gone over during the week ending May 25. (delayed in transmission). It was found that while the grass is good, the water condition is serious as practically all the water holes are dry. What little water remains in the larger pools is so foul as to be unfit for use. On the trails near the streams the feed is entirely exhausted. Most of the range outfits that are late trailing in are following the streams with the result that the ewes are drying up and the lambs becoming stunted. A few are taking the usual spring trails and doing without water. As the weather has been cool and the feed succulent, these are faring well.

Of the range bands from the project which have leased land along the foot hills, the sheep are doing well. While on the inspection trip, calls were received from three project outfits that are now near Hailey, to investigate the cause of loss by poisoning. Dr. Sherril of the Bureau of Animal Industry, assisted with the investigations. Practically all the trouble discovered was from "Bighead" with some cases of poisoning by Death Camas. The losses are lighter this year than usual, amounting to less than one-fourth of one per cent since leaving the winter quarters.

The cooperative herd of cattle from Acequai and vicinity which is held on the desert northeast of Minidoka was visited. Four hundred head of cattle are held here and supplied with water from a well on a homestead. This well is 170 feet deep and is easily supplying water to this number of cattle. The cattle are in better condition than in any of the other associations. The grass is good as it has not previously been used in this section. It is believed that on the sage-brush range where the water is supplied from a well, the number of cattle should not exceed 400.

Wool from the range outfits is moving rapidly, most of it being consigned to eastern firms.

Range ewes are selling from the shearing corrals at from \$21 to \$23 with lambs at the side, extra lambs at \$7 to \$7.50 and ewes without lambs at \$15 and \$16. As yet, no lambs have been contracted for fall delivery.

In the section northeast of Rupert, four farm flocks of sheep have been raided by dogs with losses ranging from 5 in one flock to 16 in another. The Idaho law is poor, allowing compensation only in case the ownership of the dogs can be proved.

Shearing of the farm flocks of sheep was practically completed during the week ending June 1. Approximately 70,000 pounds of fleece wools are listed for shipment, of which a part is in storehouses at Rupert and Burley and a part still on the farms.

The May records of the project herds in the cow testing association show an increased profit. This is due mostly to the use of



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes

Minidoka (continued)

pasture which has slightly increased the average production and has lowered the feeding costs. The pasture is counted at \$2.50 per cow per month, making pasture land return from \$25 to \$40 per acre per season. The local price of butter-fat is 41 cents.

It has again been necessary to re-brand a part of the sheep in the cooperative bands. In addition to individual brands, ear tags are being used this year.

Uncompahgre.

Eleven farms were visited during the week and calls were received from 17 sources.

A part of the week was taken up with the matters of the bull association. A meeting of the members was held and a board of directors chosen. The directors met Saturday afternoon and elected officers for the Association.

A peculiar case of sickness has recently developed among calves. It is in the form of a distemper, and has been pronounced contagious by the local veterinarians. So far the outbreak has occurred on four farms. An attempt is being made to locate the trouble.

The first cutting of alfalfa is now being harvested.

Six farms were visited during the week ending June 22 and calls were received from 10 sources.

Two days of the week were spent in trips to various parts of the Forest Reserve to see sheep and investigate the condition of the feed on the range. It was found that the range has been short due to the lack of rain up until a week ago when a good rainfall resulted in a good growth of grass and it is practically assured that the feed will be better the remainder of the grazing season. Assistance was given one sheep owner to locate a herder for his sheep. It has been quite difficult to obtain good herders for sheep, and the wages paid are as high as \$75 per month.

Plans are being laid for the organization of a hog shippers' association at Olathe to take care of the cooperative shipments of hogs at that place.

North Platte

On Monday of the week ending June 22, a trip was made into the country south of Scottsbluff with one of the farmers on the project to purchase a registered Holstein bull, the animal bought was a yearling and was brought up to a small dairy farm west of Mitchell where he will be used on nine cows this year. This is the fourth



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

North Platte, (continued).

registered Holstein bull that has been brought onto the project this spring.

A trip was made into the western end of the project on Tuesday and Wednesday to look after general live stock conditions. Two farms were visited on which there are concrete silos. The owners stated that last year they raised more than 20 tons of sunflowers per acre and put the entire crop of sunflowers into the silo. This feed was used entirely for milk cows and gave excellent results. Both men were very enthusiastic about sunflower silage and have planted the same crop for this year, planning on putting it into the silo.

Several farms were visited during the week where there were a large number of pigs troubled with sore mouth. This trouble seems to have taken the place of cholera among the hogs on the project this year as there has as yet been only one case of cholera.

A peculiar condition among the hogs at one farm was discovered this week. The hogs were off feed, constipated, and had several boils on their sides and legs. The boils were opened and cleaned with dip solution and the hogs given a big dose of epsom salts in their slop and then self feeders were filled with lime, coal, salt, sulphur, and copperas. In two or three days the hogs were as well as ever and on full feed.

Better than 50 per cent of the alfalfa hay cut this week was ruined, or nearly so, because of so much being cut down ahead of the stacker and two heavy rains coming after the hay was all down.

The warm weather has created a great demand for ice cream and both the creameries in the valley are urging the farmers to bring in their sweet milk. The price is still \$3 per cwt. for whole milk and 41 cents for butter-fat.

Tieton.

Five calls for assistance were answered during the week ending June 22, 19 farms were visited and five office conferences were held. A picnic meeting of the Yakima valley Holstein Breeders' was attended Saturday. One day was spent in visiting farmers in regard to reorganization of the cow testing association.

Haying is well under way and the crop though not heavy is of excellent quality. The few light showers have not been sufficient to check curing and the cool weather has cured the hay slowly resulting in a minimum of shattering when handled.

The Yakima Holstein Breeders' met primarily to discuss whether or not to hold their annual sale of pure bred cattle this fall. It was



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Tieton (continued).

It was decided to plan for the sale although present conditions do not encourage enthusiasm in the prospects. A few hay contracts have been made at \$20 per ton baled and on board cars and this price is not encouraging dairying.

The local employment office of the U. S. Government reports plenty of men for haying but a slight scarcity for other work. Hay workers are receiving from \$3 to \$4 per day. Ellensburg valley growers are attempting to organize and fix the wage at \$3 for this work. Baling prices have not been announced.

Butter-fat in cream was advanced from 42 to 46 cents this week in accord with an advance from 46 to 50 cents per pound in Portland and Seattle. The Harwood cooperative cheese factory is selling milk to a local combination creamery-skim milk condensary and cottage cheese plant at the rate of 65 cents per pound butter-fat.



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WESTERN IRRIGATION AGRICULTURE.

APPROPRIATION BILL.

The Appropriation Bill for the fiscal year 1919 has not yet become a law and the Department is now being operated under a "continuing resolution" covering the months of July and August. All letters of authorization will contain a limiting clause as follows:

"This authorization is subject to the provisions of a continuing resolution \* \* \* approved July 8, 1918.

Until the Agricultural Bill becomes a law, Farm Superintendents are cautioned against incurring any extraordinary liabilities. The routine work of the farms may proceed as heretofore.

SALARIES.

Following are the provisions of the act granting increased compensation to civilian employees, as they affect the work of this office:

1. The five and ten per cent increases provided by the Agricultural Act for the fiscal year 1918 will terminate on June 30, 1918.

2. All employees on statutory and lump-sum rolls of the Department receiving salaries of not less than \$400 per annum nor more than \$2,500 per annum (except those enumerated in paragraphs 3 and 4) will receive increased compensation at the rate of \$120 per annum during the fiscal year 1919, provided such employees have been continuously in the service of the Department since June 30, 1917.

a. Employees receiving more than \$2,500 and less than \$2,620 per annum will receive increased compensation at a rate sufficient to bring their salaries up to the maximum of \$2,620.

b. Employees receiving less than \$400 per annum will receive increased compensation at the rate of 30 per cent per annum.

3. The law provides that where an employee in the service on June 30, 1917, has received, during the fiscal year 1918, or shall receive during the fiscal year 1919, an increase of salary in excess of \$200 per annum, or where an employee, whether previously in the service or not, has entered the service since June 30, 1917, whether such employee has received an increase in pay or not, such employee shall be granted increased compensation only upon the certification of the Secretary that the ability and qualifications personal to such employees justify such increase of compensation,

4. The following classes of employees will in no circumstances be entitled to the increase of compensation:

a. Employees whose duties require only a portion of their time.

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Salaries (continued).

b. Employees whose services are utilized for brief periods at intervals.

c. Employees who receive a part of their pay from any outside source under cooperative arrangements with the Department of Agriculture.

5. All persons appointed subsequent to June 30, 1917, on lump-sum rolls at salaries which include an additional amount sufficient to meet the increase of compensation granted certain classes of employees by the Agricultural Act for 1918 will for the fiscal year 1919 receive new appointments at their basic salaries, that is, the salaries they are now receiving less the amount which is considered increase of compensation.

The rules governing the preparation of pay rolls and salary vouchers in the case of the five and ten per cent increases of last year should be followed.

Disbursing Agents are advised to make no payments whatever under this act until it has been thoroughly interpreted by the Department fiscal authorities and such disbursing agents advised definitely how they should proceed.

FIELD NOTES.

Huntley.

During the week ending June 29 the maximum temperature was 93, minimum 43; precipitation 1.18 inches.

The first cutting of alfalfa hay was harvested. The crop was damaged to some extent by rain. This rain, however, was very beneficial to dry-land crops, which were burning badly. On the High Line Bench crops were seriously damaged by hail.

At a meeting of the Farmers' Picnic Committee it was decided to hold the annual Project Picnic at the Huntley Experiment Farm on July 20.

San Antonio.

During the week ending June 29 the maximum temperature was 100, minimum 70, greatest daily range 29. There was no precipitation. All crops are suffering from drought; corn is drying up rapidly and sorghum for forage is firing. Cotton is shedding both leaves and squares as a result of the drought. Milo in the rotation experiments was harvested the first part of the week.



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## WESTERN IRRIGATION AGRICULTURE.

## FIELD NOTES.

San Antonio (continued).

Sudan grass, which was cut on the rotation plats the previous week, was raked and cocked. Johnson grass on waste land was cut, raked and hauled. Sudan grass in the steer pasture, which had become too coarse for pasturing, was cut. Cotton on Field C5 and on the rotation plats was weeded. Soil samples were taken on the cotton plats in the rotation experiments. Straw and manure were hauled for mulching cotton in the root rot experiment on field C5.

Messrs. Cook and Herbert, of the Office of Crop Acclimatization, arrived Monday morning and remained throughout the week, leaving for Arizona Sunday evening.

Umatilla.

During the week ending June 29 notes on the cooperative China pheasant were taken. It was found that none of the treated seed was left untouched by the pheasants, except on one place where the farmer had set scarecrows consisting of white rags tied to a string suspended between two poles. On this place the pheasants had not dug up and eaten any of the treated corn or the corn in the field where it was planted, although the pheasants were common in that vicinity. On the three other plantings an average of 51 per cent was eaten and in one instance the stand was completely ruined.

An itinerant wheat conference of county agents and experiment station workers spent a short time looking over the farm. They covered the wheat country in Umatilla, Morrow, Gillam, and Sherman Counties and made a side trip to the Umatilla Project. Mr. G. R. Hyslop, Professor of Farm Crops, visited the farm on Saturday.

The maximum temperature was 92, minimum 50, and there was no precipitation.

Belle Fourche.

During the week ending July 1 the maximum temperature was 93, minimum 43, precipitation 0.80.

The alfalfa was hauled in Field A. All alfalfa in field A was irrigated and the second irrigation of grain was commenced.

The thinning of sugar beets is very nearly completed.

During the week ending July 6 the maximum temperature was 96, minimum 46, precipitation 1.09.

The remainder of the alfalfa was hauled and stacked and thinning corn on E, F, and G was completed. Grains, corn, potatoes were irrigated, as was also alfalfa. Cultivating corn in O, P, and G, and spring toothng forestry and orchard was also done.

5.00 P.M. - 6.00 P.M. - 7.00 P.M.

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

Minidoka.

During the week ending June 22 the sheep of the Minidoka Sheep Grazing Association were loaded at Tikura and shipped to Ketchum, on the border of the forest, a distance of 40 miles. This method was adopted by a majority vote, although it was not necessary, as the hardest part of the journey had been made.

Three bands entered the forest trails on the 21st and one on the 22nd. The holding for shipment, the shipping and the rebranding of a part of the sheep at Ketchum were the only real hardships encountered on the trip north, hence the sheep entered the forest trails somewhat gaunt but otherwise in good condition.

The drought of the spring was broken by heavy showers which began on the 20th and lasted for several days.

The sheep of the Minidoka Cooperative Association entered the summer range on the forest during the week ending June 30. The first band entered the Germania Basin, which is allotted to the association, on June 26, the second on the 27th, and the third and fourth bands on the 30th. The trip of the last two bands was delayed by holding in rented pastures near Ketchum for two days. The sheep had been on the forest trails for a week; however the rain of the previous week had caused the feed to be plentiful, hence all did well.

The management of the association this year has been far better than last. But few sheep have been lost. The first band struck a poison area during the rainy period and lost about 25 head. The second band lost over 300 from straying, the most of which were found and returned.

The first, third, and fourth bands were herded by ex-sheep-herders who are now on the project with sheep in the bands. The management of these is far better than that of the second band, which is in the care of a disinterested herder. It is from this band that practically all losses by straying have occurred. This is the South Side band that was out last year.

To overcome the difficulties of a year ago, two herders have been used in trailing.

The early Hampshire lambs of the project range bands are being shipped from the forest, practically all going to Omaha and Chicago. Two methods are being used—one to ship the entire number and divide into market lambs and feeders at the market; the other method, which is more common, is to separate the lambs at the corral, shipping the tops and holding the others for fall sales. The top lambs shipped have weighed from 65 to 77 pounds and the feeders from 45 to 65 lbs. The tops have brought 18¢ @ 19¢ on the market.

Buying for all delivery has not been general. A few sales at 14¢ are reported, but could not be verified. Offers of \$10.50 per head have been made but were not accepted for the reason that an unsatisfactory contract was presented.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

Minidoka (continued).

Range sheep men in this district are generally expecting a drop in prices, hence are in a hurry to ship to market. This tendency has been accelerated by a fear that the drought would continue the entire summer. Some uneasiness is felt at the lack of buyers and the reports from feeders that prices must be lower this year. In this case a number are planning on fattening their own lambs. This condition as well as an effort to again place the price of hay at \$15 is causing a wide spread interest in the use of supplementary feeds, such as beet tops and corn silage. An effort will be made by some range sheep men to purchase beet tops for pitting.

North Plate.

During the week ending June 29 three farmers on the project were assisted in securing a registered Holstein bull from the eastern part of the State. The bull was recommended by the State Agricultural College as being a good individual and his pedigree showed him to have good breeding. The bull is a yearling and was shipped from Pawnee County by express. The price paid was \$150 and express charges were \$26. Three brothers bought the bull together. These men have been keeping milk records on their cows this summer and they find that their Holstein cows which were shipped in from Wisconsin this spring give just three times as much milk as their red cows. They are going to sell the red cows this fall and replace them with Holsteins.

One herd of 45 head of shoats at the eastern part of the project was vaccinated with the double treatment this week for cholera. None of the hogs had cholera, but the owner wanted them vaccinated because he had cholera on the place last year.

A trip was made during the week with the engineers of drainage and irrigation to the eastern part of the project. Several of the drainage camps were visited and arrangements were made with the foremen to keep in touch with live stock conditions and a lookout for contagious diseases among the live stock in their territories.

The grasshoppers are very bad in all parts of the valley and it looks now as though there might be considerable loss of crops due to them. The worms on the beets are also very bad in all of the beet fields and are doing considerable damage. The project and county agent are both working with the farmers to kill these pests. The sugar factories are furnishing sprayers for the beet fields and the farmers are spraying the crop with Paris green.

On Saturday night of this week there was a light frost which blackened the leaves of some of the fields of beans and potatoes.

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DEONSTRATIONS ON RECLAMATION PROJECTS.

FIELDNOTES.

North Platte (continued).

On Monday of the week ending July 6 a trip was made into the eastern part of the project to investigate the cause of a number of cattle dying. On arrival at the farm it was found that the cattle were being kept in a dry upland pasture where the grass had been eaten down very closely and there was considerable loco weed in the pasture, and from the description of the cattle that had been sick and died there was little doubt that the cattle died from forage poisoning. The owner of the cattle was advised to herd the cattle through the day time in the road, which was well grown with sweet clover. On Saturday of this week he reported that no more of the cattle were sick and that they were doing very well.

A herd of 45 head of shoats were vaccinated this week with the double treatment to prevent cholera. One place was discovered, a close neighbor to the man having the 45 shoats, where there were three shoats which had cholera. The three were vaccinated and have recovered from the disease,

Arrangements were made with two of the farmers on the project for getting some Holsteins this fall. One man will take a carload of grades and the other will take six purebred heifers and a bull. Both these men are neighbors to a man who bought three of the cows that were shipped in from Wisconsin this past spring.

A Fair Board meeting was held this week for arranging live stock prizes for the Fair. It is the intention of the Board to make both the dairy and hog exhibits better than ever before.

The grasshoppers all through the valley are becoming a very serious pest. Only a small part of the farmers made an effort at first to poison them and now they have grown in size and increased to such numbers that it is doubtful if they can combat them with any success. The second cutting of alfalfa as well as the small grains will be cut short by the hoppers.

Butter fat is still selling here at 41 cents and whole milk at Scottsbluff and Morrill for \$3 per cwt.



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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES

San Antonio.

During the week ending July 6, the maximum temperature was 100, minimum 65, and greatest daily range 33. The total precipitation, which occurred in one shower on Friday afternoon, was .66 inch. All crops are suffering severely from drought, cotton and forage crops being crops which would still be benefited by rain. Cotton is shedding squares in large numbers and has almost stopped flowering.

Sorghum on plats B4-12, 13 and B5-6 was cut, raked, and cocked. It was badly infested with Johnson grass and many of the sorghum plants had dried out completely and died. Taking of soil samples on cotton plats in the rotation experiments was completed. Cotton on field C4 was weeded.

The milo from the rotation plats was threshed on Tuesday and Wednesday. The yields were somewhat disappointing, being only a little above those of 1917. The highest yield was 35.2 bushels, on a plat continuously cropped to milo and manured each year. The lowest yield was 11.2 bushels, on a plat having a very poor stand, about 35 to 40 per cent. The average yield was 21.3 bushels per acre. The stand on the other plats was fairly good, ranging from 75 to 90 per cent. The yeild on most of the plats was considerably reduced by drought.

Scottsbluff.

During the three weeks ending July 6, the maximum temperature was 97, minimum 38, and precipitation .96 inch.

Work during this period consisted of irrigating, cultivating, hoeing, thinning beets and putting up first cutting of alfalfa.

Grasshoppers are more numerous than during the summer of 1917. The County Council of Defence has asked that every farmer use some means of combatting the grasshoppers. At the Station, both the hopperdozer and poisoned bait are being used.

Truckee-Carson.

During the week ending July 6, Messrs. Farrell, Cline and Headley made a trip by auto to Lovelock to look over the agriculture of that district. The soil is apparently similar to that of the Island and Stillwater districts of the Truckee-Carson project and the crops grown are the same. Wheat, or in a few cases, oats or barley, was commonly seeded in the alfalfa stubble in early spring in order to secure an increased hay yield and a better quality of hay.



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WESTERN IRRIGATION AGRICULTURE  
Field Notes

Truckee-Carson (continued).

The following plats were irrigated: C1 to 5 inclusive; D1 to 8, inclusive; E1 to 8, inclusive; B5 to 22, inclusive; F4, 5, 6, 9, 11, 12, 13, and 14, and H1 to 20, inclusive.

The alfalfa, sweet clover and barley hay were harvested and stacked, and average yields obtained as follows:

Barley.....	4.14 acres	1275 pounds per acre.
Sweet clover.....	.66 "	1273 " " "
Alfalfa.....	10.00 "	2443 " " "

The barley and sweet clover hay was all grown on the poorest plats.

The effects of gypsum treatment on Field Y are indicated in the following table showing the yields of alfalfa hay secured in the first cutting:

Plat No.	Treatment	Yield per acre	Increase over check plats
1	Tile, gypsum, manure.....	1170	
2	Check.....	500	725
3	Tile, gypsum, manure.....	1260	
4	Tile, gypsum, manure.....	390	
5	Check.....	1355	7
6	Tile, gypsum, manure.....	2335	
7	Gypsum, manure.....	2055	
8	Check.....	1690	115
9	Gypsum, manure.....	1555	
10	Gypsum.....	1220	
11	Check.....	0	720
12	Gypsum.....	220	
13	Tile, gypsum, manure.....	1555	
14	Check.....	555	695
15	Tile, gypsum, manure.....	945	
16	Sulfuric acid.....	345	
17	Check.....	0	333
18	Sulfuric acid.....	320	



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Field Notes.

Truckee-Carson (continued).

An increase in yield resulted from each treatment but because of the spotted character of the soil it is impossible to say which particular treatment has been most effective.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES

Umatilla.

Mr. Allen reports as follows for the month of June:

Warm weather prevailed during June. There was little wind and no showers of consequence. The prevalence of warm weather caused a very marked increase in the growth of alfalfa toward the close of the growing period of the first cutting. All early-cut fields grew rapidly and many were ready to cut again by the last of the month at which time the second cutting was begun on some farms. The first crop was put up in excellent condition and much of it was baled, or hauled to the chop mill direct from the field.

Alfalfa hay began selling at \$14 and \$15 in the field, \$6 per ton higher than in 1917. At the close of the first cutting much of the hay harvested was removed from the project under a heavy demand from the coast counties.

Gardens, generally, look poor as the early season was quite cool followed by continuous warm weather in June.

The work in June has been of a miscellaneous character. Some demonstration work was done, a study made of the pastures on the project; a determination made of the cheat grass (Bromus tectorum) in the alfalfa, and office work being performed.

Uncampahgre.

A part of the week ending June 29 was given, at the request of the County Chairman, to the work of the War Savings Stamps drive. Two trips were made to the Forest Reserve to inspect sheep and look into the condition of the range. The feed conditions are quite favorable and a good supply of feed is assured since the recent rains.

The hogs on the project are doing as well as can be expected with the shortage of grain on pasture. Many of the farmers are compelled to use no grain at all as it is not available at prices within reach. One or two reports have come in regarding sickness among hogs fed potatoes. This is found to be due to the poison from sprouts. Several notices were published warning the feeders against the trouble.

Work was started on the building of the pen for one of the association bulls.

Owing to the hot weather, the farm sheep have suffered a great deal within the last month. Shade is being recommended and in some cases the sheep are sent to the higher ranges.

A silo excursion is being planned for the last of July, as a part of a general silo campaign in cooperation with the County Agent of Montrose County.

Butter-fat is bringing 41 cents at the Montrose Creamery.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Uncompahgre, (continued).

Haying is well under way on the project and the yield is a little lighter than last year. Other crops, especially grains, are looking well. The potato stand appears light this year due to seed rotting after planting.

Monday of the week ending July 6 was taken up with a trip to Crawford, Colorado, to assist a project farmer in the selection of a Shorthorn bull calf. The calf was purchased for \$200.

Milk was tested on two farms during the week, on farms where regular testing is being done. One farmers was assisted in the selection and location of Duroc Jersey hogs for breeding.

Shoshone.

Most of the week ending June 22 was given to arranging for the wool shipment, in getting the cattle of the Shoshone Live Stock Association started to the Forest Reserve, to looking after the marketing of butter for the Powell Creamery and to helping with the management of the Powell Breeding Association.

Harvesting of the first crop of alfalfa got into full swing this week. A large yield is expected.

During the week ending June 29, W. H. Aldrich, who was recently appointed county agent for Park county, called and arrangements were discussed for cooperating in demonstration work.

The keeper in charge of the stallions belonging to the Powell Breeding Association started capsule breeding this week. He was given assistance for two days in getting this work started.

High water has interrupted train service so that the Powell Creamery has not been able to ship butter to Billings for several days. It has sold some to new customers and held some in the cooler. The agent at Garland for the Yellowstone Creamery Company of Billings has shipped cream to the Shoshone Creamery at Basin during this time.

During the week ending July 6, a trip was made to Basin to arrange with the county agent of Big Horn county for cooperating in demonstration work on the Deaver division of the Shoshone project. Very little has been done there so far, with livestock, as this is the first year for farmers on their farms. The Shoshone creamery at Basin was visited and methods of management discussed with the manager.

Friday was set for the day to receive wool at the car. All of them except one delivered their wool. This man delivered all of his



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Field Notes

Shoshone (continued).

wool which he has sheared and he is paying the demurrage while he finishes shearing. Only two fleeces known to have been produced on this project are not in this shipment. The men who had much less than a sack, pooled their wool and shipped it in the name of one of the banks, sacking their wool at the car.

Tieton.

Three calls for assistance were answered during the week ending June 29, 27 farms were visited and five office conferences were held. Thirteen visits were in regard to possible cooperative selling of alfalfa hay to Coast dairymen who expect to send a representative to the Valley soon.

A great deal of the late planted beet acreage is badly blighted and growers are much concerned over the probable decrease in tonnage this season. Local officials of the Utah-Idaho Sugar Company have requested the company's agriculturist and a specialist of the U. S. Department of Agriculture to come to the Valley and explain the situation to the growers.

The Pacific Coast dairymen are anticipating another attempt to buy hay direct from Yakima growers. The attempt made in 1917 was almost a complete failure due to the increased activity of the hay brokers who secured hay by contract and by boosting prices. This year it is planned to approach the problem quietly through the offices of the county agriculturists on Puget Sound who will reach the local hay growers through the Yakima county agriculturist and this office.

The association of hay balers has agreed to bale for \$3 per ton although they were holding for \$3.50. The newly-formed hay and grain growers' association in the Ellensburg valley has agreed to pay \$3.10 per ton for baling but have held harvesters' wages to \$3 per day and board. Local stackers have been paid as high as \$5 per day and board, and common harvesters are receiving as high as \$4.50 per day and board.

Some sales of alfalfa hay at \$21 per ton baled and on board cars are reported from the Yakima Indian Reservation. The Yakima Hay Growers' Association has issued a bulletin advising the members to hold for \$25 or \$26 per ton, saying that there are not more than 3000 tons of first class hay on the Reservation, the principal hay growing district. Some hay is moving, baled from the cock, to Seattle but dealers feel that the season is not far enough advanced to indicate the price for the rest of the crop. It is probable that the best hay in the Yakima valley this year will be found on the Tieton project and on the Snipes Mountain and Grandview Extensions of the Sunnyside project for cheat has not gained as much headway in these as in other districts.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Truckee-Carson.

Feeding Potatoes to Fattening Hogs.

Mr. Cline reports as follows regarding feeding potatoes to hogs: The object of this experiment was to determine the value of raw potatoes when fed to hogs in connection with alfalfa pasture. The experiment was begun May 1, at which time the initial weight of the 28 hogs was 3841 pounds. During the first ten days of the experiment, the hogs were kept on the alfalfa pasture without supplementary feed. At the end of this ten day period the hogs increased in weight from 3841 to 3918 pounds, an increase of 77 pounds or a percentage daily gain of .20. From May 11 to June 15, the hogs were allowed raw potatoes without limit in addition to the alfalfa pasture. During this 35-day period, they ate 26,000 pounds of potatoes and made a total gain in weight of 1058 pounds or a percentage daily gain of .70. While these pigs were being fed potatoes in connection with alfalfa pasture they made gains in weight at the rate of one pound for 24.5 pounds of potatoes eaten. If it be considered that the alfalfa was responsible for the same proportion of gain throughout the experiment as it was the preliminary ten days then 269.5 pounds of the net gain should be attributed to the alfalfa while the potatoes were being fed, and 788.5 pounds should be attributed to the 26,000 pounds of potatoes fed. Then 32.9 pounds of potatoes were responsible for one pound gain in weight. Since the potatoes fed were purchased at 25 cents per hundred the pork produced by them was produced at the cost of 8.2 cents per pound.

The net selling price of the hogs was \$15.25 per hundred, thus leaving a profit of \$7.05 per hundred pounds of pork produced by the potatoes. In other words the potatoes were sold to the hogs at the price of 46.3 cents per hundred or a profit of 21.3 cents over cost. The total profit on the gain in weight of 788.5 pounds was \$55.58. In addition to this profit on gains the original weight of 3841 pounds was increased in value by fattening 50 cents per hundred pounds, or a total increase in value of \$19.20. This, added to the \$55.58, makes a total profit of \$74.78 to be attributed to the potatoes fed. This brings the total value of potatoes used in this experiment up to \$10.75 per ton.

From the results of this feeding test it may be concluded that with hogs at present prices, when potatoes have a market value of more than \$10 per ton, they should not be purchased for hog feeding with the expectation of making profit, when potatoes are to be fed in connection with alfalfa pastures as in the experiment reported. On the other hand, if the potatoes and hogs are owned by the same party a price of \$10 per ton may be realized by the potatoes when fed to the hogs with alfalfa pasture.



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Field Notes.

North Platte.

During the week ending July 13, one case of hog cholera was found in a thickly settled community southwest of Mitchell. There were only ten hogs in the bunch and these were all vaccinated. Two other herds of hogs, of 38 head each, were also vaccinated to prevent cholera. One of these herds was in the eastern end of the project where there was considerable cholera last year. Several herds of hogs have already been vaccinated this year on places where there was cholera last year. In this way it is thought it will be possible to prevent the recurrence of as much cholera as there was last year.

One of the farmers on the project was assisted in the selection of four ewes. This man does not have any live stock on his place and was induced to buy these four ewes as an experiment to see what profit there was in some kind of live stock. Another man who had no cattle was assisted in buying a good dairy cow and two calves for a little start in dairying.

Some of the farmers on the project seem to be having fairly good success in poisoning the grasshoppers but these are very much in the minority. This week, a great many of the farmers made hopperdozers, to be drawn by horses, and with these many of the men think they are having better success than they have had with poison.

As a general rule, crops are in excellent condition all over the project and live stock are also in very good shape. Many fields of spring wheat were harvested this week and the coming week harvesting will be on in full swing. There were two very good, quite general, rains on the project this week.



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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES.

Huntley.

During the week ending July 13, the maximum temperature was 97, minimum 38, and precipitation .49 inch.

Harvesting of the first cutting of alfalfa hay was completed. The crop was unusually heavy but was damaged somewhat by rain. All of the alfalfa, potatoes, sugar beets and grain were irrigated. Frequent light showers during the past three weeks have been very beneficial to dry land crops, although in most cases spring grains were so badly burned that they will not recover. Winter wheat on lands adjacent to the project is being harvested, and where this crop was grown on the summer tilled land the yield will probably be from 15 to 30 bushels per acre.

Irrigated wheat on the Huntley project is doing especially well. Most of this wheat was put in on land that was in beets in 1917 and the acreage comprises perhaps about one-fourth of the project.

Mr. Edward G. Noble left on July 10 for Berkeley, Calif., to enter the Ground School of the Aviation Service. Mr. Don G. Magruder of the Shoshone project and Mr. W. E. Thompson, of the Dairy Division, were visitors at the Farm during the week.

Scottsbluff.

During the week ending July 13, the maximum temperature was 88, minimum 53.

The work during the week consisted of irrigating, cultivating, hoeing and running grasshopper catcher.

The grasshoppers are doing a great deal of damage at the present time. This is particularly true in oat fields. When the oats are cut there is danger of the grasshopper going from the oats to the potato and beet fields. Many farmers are using both catcher and poison bait. The poison bait has not proved entirely satisfactory in the great majority of cases. The poison kills a great many but does not kill enough to stop the damage.

Except for the damage done by the grasshoppers the crops are looking unusually good. Most of the first cutting of hay was in the stock before the fourth of July which was much earlier than common.

Most of the hay crop was put into the stock in very good condition. The acreage of small grain, particularly wheat, is large and the crop shows promise of very good yields. The beet acreage is considerably less than last year. Farmers whose farms are far removed from beet dumps are, as a rule, growing crops that do not require so much hauling. On an average the beets this year were seeded on much better land than heretofore.



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WESTERN IRRIGATION AGRICULTURE.  
FIELD NOTES.

Scottsbluff (continued).

The potatoes are looking good and the report from the government project show 6,647 acres as compared with 4,833 acres in 1917.

San Antonio.

During the week ending July 13, the maximum temperature was 104, minimum 68, and greatest daily range 33. There was no precipitation and the drought is seriously affecting the development of the cotton. Cotton is shedding squares and small bolls in large numbers and the lower leaves are yellowing and falling off.

Following the shower of the previous week, cotton was cultivated. Orchards were also cultivated. Plowing of milo plats in the rotation experiments was completed. Pinto and pink beans in the variety test on field B4 were harvested. They were poorly developed and the yield will be very light. Sudan grass hay from the rotation plats and sorghum hay from three plats was hauled in. Field D3 was disked. Cotton on field AB8 was weeded and some weeding was done on the roads.

During the week ending July 20, the maximum temperature was 105, minimum 69 and precipitation .05, which was insufficient to even settle the dust.

Oat stubble on field C3 was plowed as was also the small piece of oat stubble on field B3. Soil samples were taken on the corn plats in the rotation experiments. Sorghum varieties on field C6 were harvested and threshed. The yields of grain were very low due to damage by sorghum midge and, for purposes of comparison, will not be very reliable.

Corn on the station is practically ready for harvesting. Cotton continues to suffer from drought and is deteriorating rapidly. A few bolls on the station are opening. Picking of cotton is becoming general in some localities in the country, particularly on the more sandy soils. Several bales have been marketed in San Antonio.



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WESTERN IRRIGATION AGRICULTURE.

Field Notes.

PERSONELL

Mr. F. D. FARRELL has recently been elected director of the Kansas State Experiment Station and expects to assume his new duties September first. It is expected that he will continue, during the next two or three months, the supervision of the field work of Demonstrations on Reclamation Projects and Western Irrigation Agriculture.

Mr. SCOFIELD will be absent from Washington on official business for three months or more after August first.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Tieton.

Seven call for assistance were answered during the week ending July 6, nine farms were visited anf five office conferences were held. A sugar beet disease demonstration by E. G. Titus of the office of Sugar Plant Investigations of the Bureau of Plant Industry, and agriculturists of the Utah-Idaho Sugar Company was attended on Tuesday,

Accepting Mr. Titus' explanation of the damage to the beet crop by the sugar beet hopper many of the beet growers are already re-planting their fields. Work on the Toppenish and Sunnyside sugar factories has been discontinued because of inability to secure machinery. The entire crop will be handled at the Yakima factory. Toppenish and Sunnyside growers have been assured that the factories will be completed next season provided each district plants sufficient acreage. The future of the Yakima factory is uncertain for the acreage in this district is too small to supply it without help from other districts. The sugar company's officials are planning to launch a campaign among small farm owners to plow under one or two acres of the third crop of alfalfa this fall and to plant these plats to sugar beets next spring. While this practice might supply the acreage with a minimum of imported labor and a maximum yield, it is doubtful that the farmers will take kindly to the suggestion to plow under \$20 per ton alfalfa hay.

Wheat shorts, bran and corn shorts are entirely off the local market. Pig growers are having some difficulty in securing feed to supplement alfalfa pasture. Some ground oats and corn are on the market but the quality is extremely poor because of the high fiber content due probably to the use of light oats. This feed sells for \$50 per ton, the little available corn and barley at \$70 per ton and dried potatoe waste from the evaporators at \$40 per ton.

Mr. Lewis is having considerable trouble with hisspring pigs. The ration has been alfalfa pasture and wheat shorts until the ground corn and oats feed was used to replace the shorts. Feed is supplied in a self-feeder. The pigs began to go off feed while shorts were being fed. The first indication of trouble was an offensive dysentry followed by loss of thrift and emaciation. Two post mortems showed severe gastro-enteritis. Temperatures of affected pigs were all from 104.5 to 107 degrees. Cholera was suspected but there was no evidence to diagnose the trouble as such. The affected pigs were isolated and a calomel, oil and bismuth treatment begun. Sanitary conditions are excellent except that some sour feed was found in the self-feeder troughs due to excess salivation. Some of this feed is carried to the automatic water fountain but this is cleaned at least three times daily.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
FIELD NOTES.

Truckee-Carson.

With the close of the week ending July 13, the harvesting of the first crop of alfalfa was practically completed on all ranches. Reports from the farmers indicate that the yield has been very heavy. At the beginning of the harvest there was considerable anxiety on the part of the farmers because of the great scarcity of help. In order that this situation might be relieved, this office undertook to bring in harvest help. With a small amount of advertising and cooperation with the federal employment office at Reno, Nevada, together with the securing of furloughed soldiers from San Francisco, the question of labor was soon very satisfactorily settled. The ruling wage for harvest help was \$3.50 per day and board. In a few instances \$4 per day and board were paid. The furloughed soldiers in most instances were paid \$3 per day and board, and transportation both ways. The transportation amounted to 1 cent per mile or a total of \$8 thus making the cost per day for the furloughed soldier about the same as for other help.

Considerable time has been devoted for the past two or three weeks to the community pasture proposition. The entire area of about 15,000 acres has been enclosed with a stock fence and so far the association has had the use of the pasture free together with water for irrigation. The matter of leasing the pasture has been taken up with the Reclamation Service and as soon as articles of agreement can be arranged, a permanent grazing association, incorporated, will be organized to take over the territory. The temporary association has been moving along smoothly. Eleven hundred head of cattle and horses are entered in the association, and for the month of June an assessment of 12 cents per head was sufficient to meet expenses and provide a sinking fund.

During the past week the subjects of retained placenta, bloat udder trouble and abortion have required the usual amount of attention. The subject of abortion is demanding only a fraction of the attention at the present time that it required a year or so ago. The present high price of beef has resulted in suspicious animals being slaughtered for meat.

Shoshone.

During the week ending July 13, 14 farm visits were made, 13 calls were received, and 4 other conferences were held.

The car containing practically all of the wool produced on this project was shipped Wednesday. Twenty-seven men cooperated in the shipment, the net weight of wool being 29,083 pounds. The wool was consigned to Brown and Adams of Boston, the wool being received here



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Shoshone (continued).

by one of the firm's representatives, who paid down 45 cents per pound. Each of the men had his wool sacked separately except that six men who had the smallest amounts pooled them, sacked them in one sack and shipped in the name of one of the banks. A local buyer offered the men 52 cents per pound cash for their wool.

Two days were spent on a visit to the Huntley Experiment Farm and points of interest on the Huntley project.

North Platte.

During the week ending July 20 most of the time was taken up in the interest of the hog industry on the project. Two herds in which cholera had just started were vaccinated and all of the hogs are now in good condition, none of them dying from cholera. Two other small herds were also vaccinated during the week but there was no cholera in either of these herds. In the four herds vaccinated there were 253 head of hogs and all of these are back on feed now and doing well.

With Mr. Holden, Experiment Farm Superintendent, a trip was made on Wednesday into the eastern part of the project to visit the farm of Wm. Huwaldt. Mr. Huwaldt and his partner are in the hog business now but are planning on going into it much more heavily. They now have about 12 or 15 brood sows and pigs and are planning on selling all of this stock this fall and buying 50 pure bred Duroc-Jersey sows. Mr. Holden gave Mr. Huwaldt some very valuable suggestions as to the pasture and grain needed and also the housing facilities that would have to be planned for. One other large hog farm, where from two to four car loads are finished for market every fall, was also visited, and two other general live stock farms were visited.

Aside from a few cases of cholera in the eastern part of the project, where most of the cholera broke out last year, there has been very little where there was cholera last year, but of late there have been a few cases on farms where there was never any before. Excellent results have been had in combating the cholera this year because the farmers get word to the office as soon as their hogs become sick.

Much more systematic work is being done by the farmers in combating the grasshoppers and the prospects now for a second crop of alfalfa are very good. The beet crop is also looking well and the prospect for a large yield is good.



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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES

Yuma.

During the week ending June 29, the following temperatures were recorded: Maximum 108, minimum 63, and greatest daily range 42.

Forty-three acres were irrigated.

Weather experienced through this week has been unusually humid with rain threatening several days. This condition is unfavorable for cotton growth on rich soils at this season, as a large vegetative growth is produced and bolls do not set on the lower branches of the plant. Thus far, however, there has been no general shedding of squares and bolls. The upland cotton growing on the project seem to be later than during past seasons. Plantings were later, as the result of development of poor stands from the very early plantings of the previous year.

Mr. Blair returned to the station on the 27th from Washington.

During the week ending July 6, the maximum temperature was 108, minimum 75, and greatest daily range 33.

Twenty-one acres were irrigated.

Much hoeing and cultivating among orchard and field crops was continued during the week. Dwarf milo was planted on fields A1 to 8. A wheat crop has previously been produced from these fields following two years of alfalfa pastured by steers. The soil is very sandy and of low productivity.

A distribution of a good strain of Dwarf milo seed that has been selected and bred at this station is being made to all project farmers who are interested in producing better seed is now available.

A fourth of July picnic was held at the experiment farm by the settlers on the California side of the Colorado River.

During the week ending July 13, the maximum temperature was 107, minimum 71 and greatest daily range 33.

Forty-one acres were irrigated.

A variety test of grain sorghums including the best standard varieties compared with other new varieties, was planted on Field D38 to 41, which is heavy silt soil, and on fields E5 to 8, which is sandy soil. Dwarf Hegari was planted on borders C22 and 25.

A planting of cotton in rows 18 inches apart, which might be considered a broadcast planting, was made on border C32. The short staple varieties Lone Star and Mebane are used in this test. Only a top crop is expected from this planting, which, if it should develop well, may be harvested by a mechanical picker. Very little cultivation other than an early harrowing will be possible.

Some summer pruning in the deciduous orchard was done and beans from C-35, were threshed. Hoeing and cultivating continue.



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WESTERN IRRIGATION AGRICULTURE  
Field Notes.

Yuma (continued).

During the week ending July 20, 1918, the maximum temperature was 109, minimum 59, and greatest daily range 42.

Twenty-eight acres were irrigated.

Work stock and laborers were busy with the harvest of the fourth cutting of alfalfa hay from nearly all fields and with the necessary cultivation and hoeing. Two extra Mexican laborers were secured for permanent employment. The experiment farm has been without sufficient labor most of the time for the past few months, due to the scarcity of men and the extremely high wages which are being paid for farm labor.

Corn and hay sorghum varieties for seed production were planted on the following borders: A15-1, B-21, C-7 and E-9.

Messrs. Blair and Bailey made a trip to the Otay mesa country near San Diego to harvest seed from a variety test of flax that was grown there cooperatively as a winter crop. This crop was grown without irrigation in about the same manner as winter barley is produced in that region. Although the rainfall was below normal during the past winter, the flax developed quite promisingly while barley yields were very low.

The cotton conditions on the Yuma project are very promising at present. Some fields of short staple and some ratooned cotton of long staple varieties have had open bolls for two weeks.

Truckee-Carson.

During the two weeks ending July 20, work was performed as follows: All plats on the farm were irrigated; plats growing beets, potatoes and corn were hoed; harvesting second crop of hay was begun; the wheat in the rotation plats, and the barley varieties in the cooperative experiment on the farm of Fred Sander were harvested.

The house of the farm superintendent was put on a cement foundation and the construction of a small addition was begun.

Belle Fourche.

During the week ending July 20, the maximum temperature was 92, minimum 58, and precipitation .99 inch.

The week's work consisted in getting ready for the annual farmers' picnic, which was held on Saturday.

The picnic was a success in every way, except for a shower of rain towards evening. The governor of the State was present, and over two thousand people attended.



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WESTERN IRRIGATION AGRICULTURE  
Field Notes.

Scottsbluff.

During the week ending July 20, the maximum temperature was 91, minimum 53, and precipitation .26 inch.

The work during the past week consisted of irrigating corn, beets and potatoes, and cultivating, hoeing and cutting of small grain.

Most of the grain on the dry land has been cut, also the winter wheat plat in the irrigation rotations.

The hopperdozer is being run every day. The hay from the grass plats in field A was put into the stock.

Dr. Wilcox and Prof. Howard, of the State University, were at the station Friday.

Huntley.

During the week ending July 27, the maximum temperature was 92, minimum 43, and precipitation .71 inch.

The first irrigation of sugar beets and the second irrigation of grains and alfalfa were completed. The grains under irrigation, both on the experiment farm and on the project, give promise of making exceptionally high yields.

The Huntley Project picnic was held at the experiment farm on July 20. The attendance was estimated at about 2,000. These people came mainly from the project, but there was a large number from Billings and the Yellowstone Valley, west of Billings. President J. M. Hamilton and Dean F. B. Linfield, of Montana State College; Honorable Jeanette Rankin, and Mr. Horace S. Ensign, Manager of the Montana State Fair, were visitors at the picnic.



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## DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

## Shoshone.

During the week ending July 20, an article was written for local newspapers regarding the advisability of pasturing ditch banks with sheep.

Considerable attention was given to arranging for the disposal of the sewerage of the Powell Cooperative Creamery. Before the farmers took over the creamery, the cream was not pasteurized and all wash water was run into the buttermilk tank and the owner hauled it out to the hogs. When the farmers bought the creamery, a pasteurizer was bought and a septic tank was put in and all water from the pasteurizer and from washing was run through the septic tank and from the septic tank into covered tile, so that it seeped into the ground. Finally, either because of high water level in the ground or because the tile became clogged, the waste water was not taken care of properly so a tile was laid from the septic tank to an open ditch. Now the creamery is compelled to keep foul water out of open ditches. It is planning to turn water from the pasteurizer into the open ditch and dig a large cesspool at the exit from the septic tank to receive the wash water. If this will not work it will be necessary to haul wash water away.

A farmer was assisted in the selection of a bull.

## Uncompahgre.

During the week ending July 20, 13 farms were visited and calls were received from 18 sources.

A silo excursion is being planned for July 26, and some work was done in getting the plans under way.

A hog growers' association was formed at Olathe on Saturday. The principal object of the organization is to attend to cooperative shipment of hogs.

Assistance was given three farmers in getting together a cooperative shipment of hogs.

A part of the week was spent in assisting in getting the Fair work planned for this year.

## Belle Fourche.

Mr. Aicher reports as follows for the week ending July 27:

Heavy and frequent rains during the month of July have practically assured a plentiful supply of grass on the greater part of the range and supplied sufficient water to keep sheep from being put on the market under weight and lacking in flesh.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Belle Fourche (continued).

One farmer near Vale marketed a car of February lambs and a few old ewes during the past week. The lambs brought \$18.20 and the ewes \$13.20 per hundred. The lambs averaged 70 pounds and the ewes 125 pounds. The lambs and ewes were alfalfa pastured. No grain was fed, with the exception of a small amount to ewes before the alfalfa got large enough. This farmer advises that he will not pasture any more sheep on alfalfa next year, although he expects to feed a large number during the winter and after lambing move them to the range. His losses were not excessive on the alfalfa pasture. From his statement his losses would not exceed loss on the range due to poisonous plants, predatory animals and diseases.

The majority of sheep on the project or adjoining areas owned by project farmers are of very mixed variety and many of them of questionable origin. They are a mixture of Rambouillet, Cotswold, Oxford, Shropshire and possibly some others. There seems to be a marked tendency on the part of the farmers to avoid any definite system of breeding and to prefer mixed and crossbred sheep. The Rambouillet-Cotswold cross is probably most popular. A number of Corriedale rams have recently been shipped in and will be used extensively this fall. There is considerable difference of opinion among sheep men here as to the efficacy of the Corriedale.

One part of the Black Hills National Forest has been set aside for sheep and has been leased for all it can well accommodate. This is an experiment, according to the Forest Supervisor, and the future use of large areas on the forest range will depend upon the success of this venture.

Pervailing prices for sheep and wool, if they continue, seriously threaten the cattle and the hog industry on the project. A large number of cattle have disposed of recently, the farmers declaring their intention of going into the sheep business. This may be only temporary and after the Germans are controlled, the pendulum may swing back to normal. However, the majority of sheep men are of the opinion that wool prices will continue good for several years after the war closes. But a few bands of sheep are kept on the project. Most of the sheep men arrange for summer range adjoining and winter their sheep on the project.

No contagious diseases have been found on the project, with the exception of blackleg, and the cattlemen have very generally practiced vaccination. Hog cholera has not made its appearance. If it should active cooperation of the farmers is assured to stamp it out before it get underway.

Some interest is being awakened in a live stock show on the project though it is hardly expected one will materialize this year.



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Field Notes

Belle Fourche, (continued).

From indications one can be staged next year. Material is plentiful to have a quite creditable show. The beef breeds, with the exception of the blacks, are well represented. There are several pure bred Holstein herds, an Ayershire herd, and several Jersey herds, in the milk classes. There are a couple of pure bred Ram-bouillet herds, one of International class, a couple of Shropshire flocks, and several representatives of other breeds of sheep. With the horses there are splendid stallions and mares with colts in the Belgian, Percheron, and Shire classes. There are numerous pure bred Durocs and Poland Chinas in the hog classes, with occasional representatives of other breeds.

Pasturing of hogs on alfalfa is quite generally practiced but very few farmers are feeding sufficient grain, if any at all, to insure profitable growth in the pigs. Two herds with sore mouth, (necrobacillosis) were found during the past week. Demonstrations in curreting necrosed areas and treatment with iodine were made.

A trip to Deadwood was made with a project farmer to confer with the forest supervisor relative to leasing range for 2400 sheep, the water on the range where the sheep were, being sufficient for only two weeks longer.



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WESTERN IRRIGATION AGRICULTURE.

FIELD NOTES.

Yuma.

During the week ending July 27 the following temperatures occurred at this station: Maximum 108, minimum 60, and greatest daily range 41. Thirty-nine acres were irrigated.

The greater part of the week was taken up in hoeing and cultivating. The seedling fig orchard C-8 to 16 was cross plowed in an effort to kill out Bermuda grass. Alfalfa seed from the Indian varieties on C-28 was harvested. Borders C-35 and 31 were prepared and planted to corn varieties and White Durra, respectively.

Many reports are being made of the great amount of cotton aphis that are present on cotton plantings over the entire project. In many fields these pests seem serious, while in others the cotton plants will likely outgrow serious injury. Probably the abundance of these insects is due in part to the unusually cool nights for this season of the year that have occurred during the past ten day period, which condition hindered the development of the insect parasites that normally abound. This is the first season that cotton aphis have been particularly harmful to the crop since 1914.

San Antonio.

During the week ending July 27, the maximum temperature was 101, minimum 70, and greatest daily range 31. There has been no relief from drought.

The principal field work was husking corn. All corn in the rotation experiments was harvested. The average yield from the 21 plats was 17.9 bushels per acre. This is approximately 4 bushels lower than the average yield of Dwarf milo. The highest yield from any one plat was at the rate of 31.2 bushels per acre and the lowest at the rate of 10.1 bushels per acre. The highest yield was somewhat lower and the lowest somewhat higher than was expected from careful observation of the plats before harvesting. Sorghum, which was cut the previous week, was raked and cocked. Soil samples were taken on the sorghum plats in the rotation experiments. The first picking of castor beans was made. Rhodes grass on fields B3 and B4 was cut.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

Umatilla.

Mr. Allen reports, in part, as follows for the month of July:  
Continued warm weather throughout July resulted in the production of a heavy second crop of alfalfa. In some instances the third crop is well on toward maturity. The second crop was much larger than the first, which was held back by cool weather. The yield of hay is very light on neighboring projects having no late water.

Alfalfa hay has advanced to \$17 and \$18 in the stack, and is mostly bought up. The heaviest buyers are extensive grain dealers of Portland where the hay is being stored evidently to be sold at increased prices in the Coast and Willamette Valley counties.

The high price of feed has very seriously affected the livestock industry on the project. Dairy cows and young stock are being offered at about half what they were being held at three months ago. Owing to the lack of demand for horses many are being offered for sale and a few are reported sold at very low prices.

It appears that the livestock industry is likely to suffer a very serious depression on the project and throughout the entire Pacific Northwest on account of the existing shortage and high price of feed.

The demonstration work has been of a miscellaneous character during the month. A trip was made to the Milton-Freewater district to study the grass pastures of which there are a limited number. It was found that bluegrass and white clover prevail in these pastures, and most of them are self seeded. No pastures were found to have any special care. Most of them showed evidence of neglect. It appears that the value of such pastures is not appreciated by the owners.

"Cheat Grass" in Alfalfa.

Since the first appearance of "cheat grass" (*Bromus tectorum*) on the Umatilla project its spread has been rapid and general. It has covered the desert lands, and become a serious menace to alfalfa fields. Numerous plants of this grass are to be found in practically all fields on the project, and in some, they are so prevalent as to damage seriously the quality of the first crop of hay. It is of no particular consequence in subsequent crops of hay during the year.

A determination recently made of the percentage of grass in the first crop of hay in eight fields showed that where no cultivation was given it ranged from 38.7% to 55.6%. Early cultivation of the alfalfa with a springtooth harrow, the general method of treatment, left 15 to 47.1 per cent. Where late cultivation was practiced the percentage of grass ranged from 1.7 to 5.1, and in each instance



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Field Notes.

Umatilla (continued).

the yield of alfalfa was greatly increased. It is generally believed that late cultivation, after the alfalfa is two to six inches tall, greatly diminishes the yield. This might be true in the absence of this grass, but when it is present, the late cultivation was found to increase the yield of alfalfa and slightly diminish the combined yield of grass and alfalfa.

The practice of sowing grain in alfalfa fields in fall or spring to increase the yield of hay, and to help keep down the weeds, has spread rapidly in this vicinity during the past four years.

From determinations made on alluvial soils near the Umatilla Project, it was found that the crop of hay from three farms ran from 19 to 27 per cent barley from spring sowing. Fall-sown wheat in another field comprised 57.3% of the total yield of hay. By a check sample it was found that the wheat diminished the yield of alfalfa 16 per cent.

Fall-sown barley (white winter barley) in an alfalfa field infested with cheat grass gave an average of 42.8% barley and 9.5% grass.

From the observations made this season it appears that where fields are badly infested with brome grass late cultivation should be practiced. The grass can not be exterminated in this way, but can be sufficiently reduced to render its presence in the hay unobjectionable. It can be further combatted by sowing grain in the alfalfa at the time of the last cultivation. This comes later than grain has ordinarily been sown in alfalfa fields so that very early maturing grains should be used.

By thorough cultivation at the proper time, when the alfalfa has begun to grow and is from two to four inches tall, it appears that *Bromus tectorum* can be effectively combatted. The yield of hay can be increased by sowing grain in alfalfa, especially where thin stands prevail.

Shoshone.

During the week ending July 27, a meeting of the directors of the Shoshone Livestock Growers' Association was held in this office. The Deputy Sheriff of the county was at the meeting and reported that cattle are being stolen from the Forest Reserve range. Methods of protection were discussed and it was voted to offer a reward of \$500.00 for the conviction of anyone for stealing cattle listed with the association. The registered brand of the association is easily changed and it may be advisable to get a different brand.

A state deputy veterinarian is on this project testing cattle for tuberculosis. The state law forbids the sale of products from any cow which has not been tested and found free from tuberculosis. The work is done free the first year, and practically all of the cows are being



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Field Notes.

Shoshone (continued).

tested since milk, cream or butter is sold from practically all of the cows sometime during the year. Two days were spent in assisting the veterinarian in starting the work.

North Platte.

The forepart of the week ending July 27 was taken up almost entirely with vaccinating hogs against cholera. One herd where there was cholera was vaccinated, and two other herds were vaccinated as a prevention against the disease.

A meeting of the County Fair Board was held this week and definite arrangements were made for the livestock exhibits. Many more cash premiums are being offered this year for both hogs and dairy cattle than were offered last year.

Two herds of hogs were poisoned this week by the owners giving commercial stock food mixed in the slop. In one of these herds, 17 of the pigs died the first day and a few died later. In the other herd, four died the first day and none died later. The sick ones were treated by giving them sulphur and milk mixed as a slop, after giving them a drink of water containing epsom salts.

Some time during the latter part of the week was devoted to dairying. One man was started to keeping milk records. Owing to the scarcity of help, some of the dairy work is being slighted, such as keeping records.

There are a few scattered cases of cholera in the valley but there has been no general outbreak in any community, due largely to the fact that we have been vaccinating the hogs on the surrounding farms so as to prevent the cholera spreading.

Tieton.

Thirty farms were visited during the week ending July 13.

Western Washington dairymen are undertaking to buy alfalfa direct from Yakima farmers. Practically all the hay previously purchased by the dairymen has been through hay dealers. While no one criticises the dealer who charges 50 cents or one dollar per ton commission, there is a growing dissatisfaction with the usual speculation in the alfalfa crop under which the margins sometimes exceed five dollars per ton. County agriculturist Farr of Snohomish county and one of the farmers of that district were in Yakima and bought 1800 tons of first cutting al-



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Field Notes.

Tieton (continued).

falfa, 800 tons of which were from the Tieton, at \$22. per ton. The hay dealers learned of this transaction through an accident and immediately began predicting \$24. hay and thereby raised the price without buying - at the same time discouraging further buying for the time being by the Puget Sound men.

Spring pigs weighing from 25 to 35 pounds are being exchanged among farmers to a large extent this year. The present price ranges from \$6. to \$10. per pig depending upon quality, weight and the eagerness of the buyer. Several swine growers consider that they can make a greater net profit by selling the pigs as weanlings than to keep them to maturity. In many instances this is absolutely true because the sows feed the pigs quite well up to weaning time but the owners are too lax in providing for economical growth thereafter. This is the only method whereby "poor pig men" can make a profit under present conditions and whereby he can also promote the swine industry.

Two days of the week ending July 20 were spent in Spokane attending the conference of Northern Idaho and Eastern Washington county agriculturists, field men, commercial men and farmers.

One-half day at Spokane was spent at the Union Stock Yards with the manager, Mr. John H. Roberts. Aside from having established a good yard and a steadily growing business the Roberts Bros. are encouraging two commendable projects. The scarcity and high price of grains is causing many farmers to turn half-finished stuff before the feed conditions become more acute. The Spokane county and Palouse pea and wheat fields need stock pigs to glean the waste. The Spokane Stock Yards are acting as the clearing house for stock pigs of that region. There is no doubt that farmers lose much money by selling meat animals to local butchers, unattached buyers and traders. Like the Portland Stock Yards, the Spokane Company is putting an extra effort into reaching stockmen with market news letters and marketing information and suggestions. In conversation with a farmer who had just sold a cooperatively shipped car of hogs at the Spokane yards it was learned that the three grades into which the load was divided each brought more than \$2. per cwt. over the price offered by a local butcher in a district where a few local buyers usually handle all the meat animals shipped out. The entire cost of shipping and marketing was less than 25 cents per cwt. in this instance.



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Field Notes.

Tieton (continued).

Three dairymen from Snohomish county, Western Washington, were in the Valley in regard to buying alfalfa hay. The hay dealers have continued their artificial price raising tactics and have purchased a few tons for immediate use in Seattle at \$24. per ton f.o.b. Yakima. While many hay growers have expressed satisfaction with the \$22. price, especially because they do not desire to injure the coast dairy industry and thereby the future hay market with high hay prices, they are not anxious to sell with a better price in prospect. It is not probable that a great deal of hay will move before the second crop is ready to bale and the Snohomish men were advised to return at that time and contract for their needs at the market price, which will still be less than the dealers price to them.

Seattle butter fat price advanced to 53 cents this week which brings the local "on the farm" price to 49 cents. The market milk quotation for condensaries is \$2.40 on the Coast. The Harwood Cooperative Cheese Factory is selling whole milk at 15 cents per pound butter fat over the Seattle price or \$2.58 per cwt. for 3.8 per cent milk.

Agricultural Problems in the Inland Empire.

The following report, submitted by Mr. Bean, is reproduced here for two purposes: (1) To indicate something of the present agricultural situation in the Inland Empire, as that situation was discussed at field conferences at Spokane July 17 and 18; and (2) To illustrate a good method of reporting on such events by our field men. Mr. Bean's report probably would be improved by the inclusion of a summary of Dean Iddings' discussion of "Livestock and the War", and by somewhat more extensive comments on some of the other topics mentioned; but, nevertheless, the report is both interesting and instructive.

PROGRAM OF COUNTY AGENTS CONFERENCE.

Spokane, Washington, July 17, 1918.

I - The Labor Supply of the Inland Empire. Discussion by State and Federal employment office agents and field men revealed no labor shortage at present and predicted a sufficient supply for the season. Ship yards employees common laborers, are migrating to harvest fields for a change and in the wheat districts especially machinery such as two men combines are reducing the man labor needed. Problems in the operation of local and county employment offices and agents were discussed.



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Field Notes.

Tieton (continued).

- II - Agricultural Features of the Interstate Fair. A talk by one of the fair officials to the effect that while no less effort will be made to secure livestock exhibits this year it is not anticipated nor desired that the show herds be fitted as in the past.
- III - Seed Growers' Association Work in the Inland Empire. A county agent project in the first stages of development. A committee was appointed to suggest a policy and plan of organization so that county units could be combined with each other to form an Inland Empire Association. The inadequacy of the seed and weed laws were discussed.
- IV - Uniform Projects in Border Counties. Reference is made to the borders of Washington and Idaho and the discussion was chiefly concerned with the grain growing industry.
- V - Inland Empire Dairymens' Association. A project whose greatest development is among Western Washington dairymen and whose purpose is price protection by cooperation. Spokane county dairymen have formed a Dairy Association which promises to be worth while if properly managed. This is a suggested project for all agents in dairy counties.
- VI - Farm Bureaus in Idaho. Organization and operation.
- VII - Miscellaneous:
- (a) The Inland Empire grain crops are not up to normal due to heat and drought. Many fields, however, are all that can be desired. The pea crop is approximately 75 per cent normal. Many patriotic farmers will harvest crop regardless of yield, that no grain may be wasted.
  - (b) The hog feed situation is acute in some portions of the Inland Empire where alfalfa pasture is not used. Some farmers and dealers are holding grain in or near districts where it is needed very much. It was suggested that county agents and others who will cooperate operate an informal clearing house in regard to supplies of grain - the information and requests to be handled at the Extension Offices.



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Field Notes.

Tieton (continued).

PROGRAM OF THE JOINT MEETING OF EASTERN WASHINGTON AND NORTHERN IDAHO, FIELD MEN, COMMERCIAL AGRICULTURAL MEN AND OTHERS.

- I - The Probable Feed Situation. By Mr. Hebbard, State Food Administrator. The unusually large demand for mill feed in 1917-18 because of the high price of grain created high prices and an apparent scarcity even though the mills of the Northwest milled 110 per cent as much grain in 1917 as the average in 1914-15-16 by reason of the Grain Corporation control of milling. It is anticipated that in 1918, with no apportionment of grain to mills by the Grain Corporation, the mills of the Northwest will mill no more than the pre-war average and that the scarcity of mill feeds will be more acute in 1918-19 than in 1917-18. Stockmen who will have to buy grain for feeding are advised to do so at the earliest opportunity. The high prices of wheat substitutes and policies of the Food Administration were discussed for the benefit of the county agents in explaining the situation to farmers.
- II - Increased Pork Production in Spokane County. County Agent Shinn told of the campaign which returned over 800 "piggy" sows which were received at the Stock Yards to farms. He emphasized the value of the gleanings secured by pigs from pea and wheat fields and the methods employed. Good stockers gain from one to three pounds per day on pea fields and secure from 100 to 200 pounds of gain per acre. Registered men who have been granted deferred classification on agricultural grounds are, in Spokane County, requested to buy at least one brood sow each. Approximately 25 sows, most of them pure breeds, have been distributed in this manner.
- III - How the Bankers Can Cooperate. A discussion by E. E. Flood, ex-farmer and now vice-president of the Exchange National Bank. Mr. Flood has made many loans in pig club work and is a conservative "booster" for more good livestock. He stated that he has loaned money to boys and girls on unsecured notes when he wouldn't have extended the same credit to the parents of some of them under any condition. It is his conviction that parents of questionable honesty in their own dealings are almost universally religiously scrupulous in helping their children to follow honest methods,



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Field Notes.

Tieton (continued).

IV - Extension Activities in Washington. Director Thornber spoke of the extent and major projects of the service.

V - The Livestock Industry and the War. Dean Iddings.

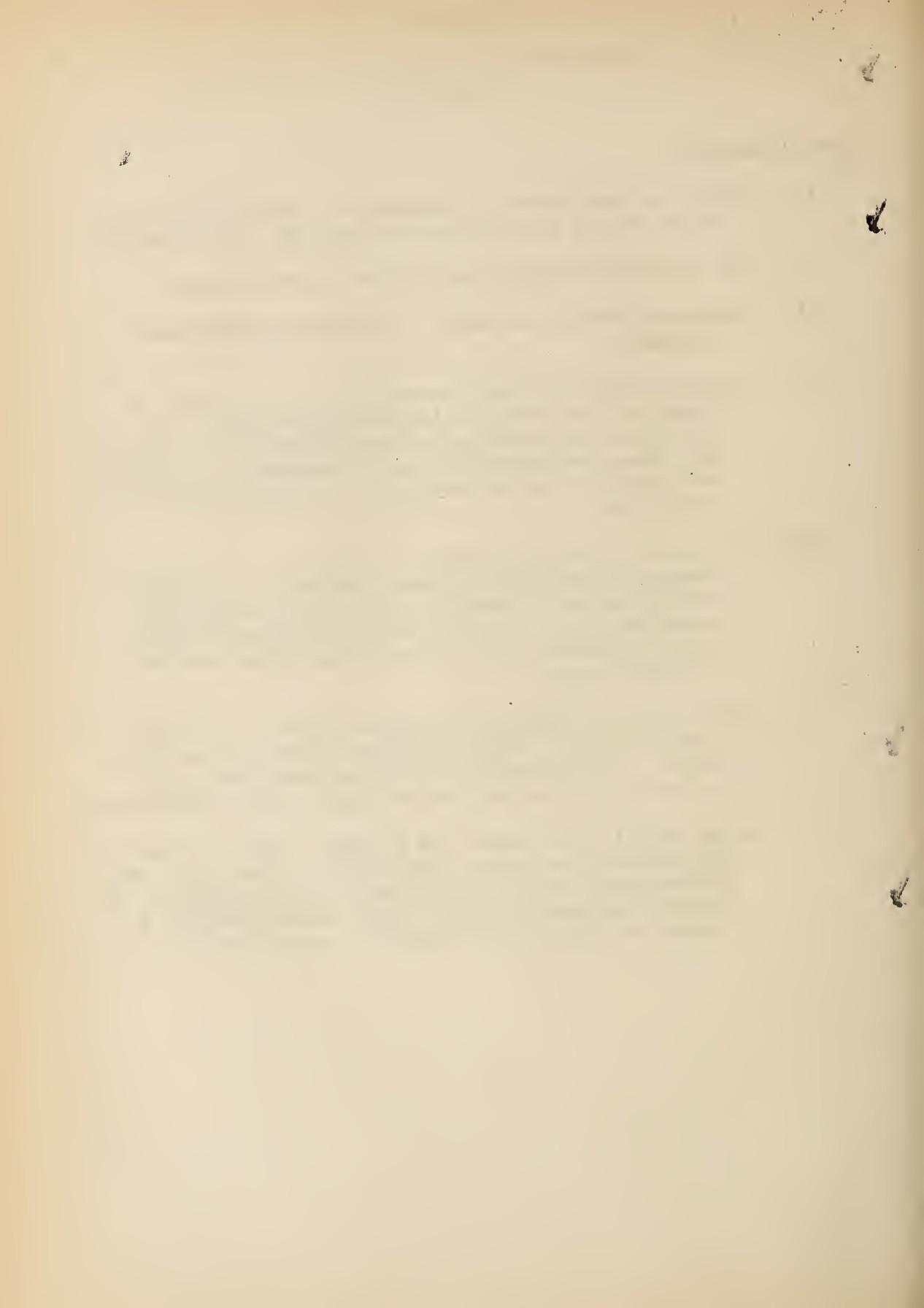
VI - Extension Problems in Idaho. Assistant County Leader Kjosness.

VII - Present Problems of Pork Production. J. N. Price, Mr. Kerr, Mr. Rinehart, Mr. Lampson and Mr. Bean. A discussion of economically feeding grain, of hogging-off crops, management and use of pastures and forage and other factors of management affecting economical production.

VIII- The Market for Hogs. Discussed by Mr. J. M. Van Kleek, Manager of Armour and Company, Spokane. A growing premium for well finished pigs and the conservative promotion of the industry within the limits of sufficient available feed to secure this finish were the principal topics.

IX - What to do with Unfinished Hogs When There is No Feed. Discussed by Mr. John H. Roberts, Spokane Union Stock Yards. An explanation of how the stock yards can and are supplying the pea and grain fields with stockers.

X - Buying Hogs for the Packer, by Mr. Geo. Schille of Armour and Company, who favors cooperative shipments not only because they usually make money for the hog growers but because the growers become better acquainted with the market and the men who handle the buying and packing end.



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WESTERN IRRIGATION AGRICULTURE.

FIELD NOTES.

Umatilla.

The maximum temperature for the week ending July 6 was 98, the minimum 40 and .03 inch precipitation fell.

The vetch in the lower part of the Cl orchard was cut for seed and stacked preparatory to flailing out. The row crops were cultivated and hoed after irrigation.

The maximum temperature for the week ending July 13 was 99, the minimum 45, and there was no precipitation.

Messrs. Stewart and Pittman of the Utah station visited the farm during the week.

A large break in the "A" line canal near the reservoir stopped all the water on the project for five days. Very warm weather prevailed at this time and considerable damage was done through the lack of water. The only crop on the Experiment Farm to suffer materially was the corn in the D4 rotation.

During the week ending July 20, the second crop of hay was put up. Very favorable weather prevailed during the period of the second crop and it was cut 32 days after the first.

Mr. Dean attended the Conference of Western Agronomists at Corvallis.

The maximum temperature was 110, the minimum 56, and there was no precipitation. The maximum of 110 was 4 degrees higher than ever recorded at the farm before. It was accompanied by a southwest wind which dried things out badly.

The maximum temperature for the week ending July 27 was 84, the minimum 50, and .05 inch precipitation fell.

The corn varieties are tasseling and maturing very fast. It is thought that the early maturing of these varieties is due to the fact that they were not irrigated more frequently. They are on land which comes under the two-week schedule for irrigation and have dried out badly between irrigations since the warm weather started.

The forestry and ornamental planting was given a rather severe summer pruning to start shaping up the trees preparatory to taking part of them out this fall so that the rest may have room to develop.

The maximum temperature for the week ending August 3 was 100, the minimum 47, and there was no precipitation.

The orchard in Cl was given a thorough irrigation and disk-ing the vetch cover crop was begun.

The rainfall to August 1 for the year was 2.51 inches, which is only 43% of the normal.



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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

Belle Fourche.

During the week ending August 3, the maximum temperature was 100 and minimum 49.

All the corn, sugar beets, and potatoes were irrigated in field A, and Forestry very nearly completed. The harvesting of grain was continued during the week, and will be finished in a few days. The balance of the time was used in hoeing weeds and cleaning up around the buildings.

San Antonio.

During the week ending August 3, the maximum temperature was 100, minimum 68, and greatest daily range 30. Showers amounting to a total of 1.09 inch precipitation occurred on July 31 and August 1. While not sufficient to wet the soil to any great depth, this rainfall was beneficial in cooling the atmosphere and to forage crops.

The principal field work was weeding. Scattering patches of Johnson grass were hoed from fields C4, C5, C6 and D3 and from the farm roads. While too wet for field work, labor was utilized in threshing nursery row flax which had to be done by hand. After the soil had dried sufficiently, fallow rotation plats and other fallow fields were harrowed and orchards were cultivated. Plowing of field D4 was started.

Mr. H. F. Loomis returned to the station on Thursday, after spending some time on cotton work in Arizona.

Yuma.

During the week ending August 3, the maximum temperature was 115, minimum 64, and greatest daily range 42. Twenty-one acres were irrigated.

The greater part of the week was taken up with cultivating and hoeing. In a rather extended trip over cotton fields of the Yuma project, it was found that the cotton aphis is on the decline, as the parasitic insect enemies of this pest are accomplishing very good work. A more serious injury to the cotton crop than that of aphis is being perpetrated by the cotton boll worm. Its ravages have never before been so serious in this region. It seems that at the present time the crest of this injury is being experienced and that later squares and bolls may escape damage.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

Shoshone.

During the week ending August 3 an article was written for the local newspapers on the cooperative shipment of cattle and sheep. The disposal of sheep from the small flocks here has been quite a problem since there have never been enough sheep to sell from the small flocks to make a carload and the railroad will not allow more than one kind of stock in a car if they must be unloaded enroute for feeding. The Billings packing house has refused to buy sheep so far.

A meeting of potato growers was held in this office, 15 men being present. Arrangements were made for the purchase of scales and office for the use of those whose potatoes will be handled through the Potato Growers' Association.

Some of the new seedings of mixed grasses for cow pasture were visited this week. Some very nice stands were found. Where grass is sown in grain there is a tendency not to irrigate enough.

North Platte.

During the forepart of the week ending August 3, a trip was made into the northwest end of the project to inspect some hogs for cholera and to do some general livestock work. Two cases of cholera were found in this part of the project and the herds were promptly vaccinated and the necessary precautions taken to prevent the spread of the disease to surrounding farms. One case of cholera was also discovered in the eastern part of the project this week. There have not been as many cases of cholera this year as last but for the past two months there has been one or more new cases of cholera each week. The very best of success has attended the vaccination against cholera so far this season, less than one per cent of the treated hogs dying.

Commercial stock foods have caused some loss in this valley this year. Three different herds have been visited within the past week where all or a part of the herd had been poisoned with commercial stock food, and each herd was poisoned with a different brand. The loss in the three cases together was about ten per cent of the hogs.

Three herds of hogs were poisoned this week by eating the poisoned bran (arsenic poison) put out for grasshoppers. About ten hogs were lost in the three herds from this poisoning.

Some work towards getting live stock exhibits for the County Fair was done this week.



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Field Notes.

Truckee-Carson.

On Tuesday of the week ending August 3, a visit was made to the Federal Free Employment office at Reno to inquire into the availability of harvest hands for the second alfalfa crop. The agent in charge of the office was very optimistic and said he felt sure that the State of Nevada need not suffer for the want of farm help, if proper contact be made with the labor employment office. The second alfalfa harvest will be in full operation by the 12th of this month. The harvest is expected to be extra good. The uniform wage of \$8.50 per day will probably be paid for common harvest labor.

Following the trip to Reno, a day was spent in Sacramento, interviewing the officers of the Allied Dairymen's Association. This organization, while new, claims a membership of 10,000 producing dairymen. Membership in the organization is secured by payment of \$5.00 per cow owned or a minimum of \$50.00 per member. The organization is non-profit-sharing. Their activities embrace production, manufacturing and marketing of all classes of dairy products. By organized effort they hope to decrease the cost of production and manufacturing, as well as the cost of marketing, in this way, materially increasing the net returns to the producer without necessarily increasing the cost to the consumer. They are endeavoring to have allied with them the various dairymen's organizations throughout the West. The activities of this organization will no doubt be watched with interest by centralizers in the western states, where it is largely these concerns that will be affected, if the allied dairymen's organization is successful in its ambition.

Belle Fourche.

Requests for assistance were attended to during the week ending August 3 relative to two herds of pigs infected with necro-bacillosis. In both cases, infection had advanced to the intestines. In each herd small necrosed areas were found in the mouth. An acrid, fetid discharge was given off from the bowels. Upon post-mortem of one case, small necrosed areas in several localities of the large intestines were found. Recommendations for treatment were given and suggestions for better sanitation made. In a herd of sheep, found one with a partial posterior paralysis. Owner reported three cases in lambs and one in a ewe. The animals could stand well enough but in attempting to run would lose control of hind limbs and fall. The lambs and ewe lingered from one to three weeks



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Belle Fourche (continued).

before death. They became very thin and emaciated before death. Could not determine the cause of this trouble.

The dairy barn of Mr. M. J. Smiley's Holstein breeding farm has recently been equipped with Hinmen milking machinery. The equipment is giving good satisfaction and is assisting materially in solving the labor problem. No difference is noted in the quantity of milk. Stripping is necessary. The cattle not having access to grass pastures, Mr. Smiley is feeding a mixture of concentrates and giving the cattle all the alfalfa hay they will eat. To each three pounds of milk, each cow gets one pound of a mixture of 600 pounds oats, 300 pounds dried beet pulp, 200 pounds bran, 100 pounds cottonseed meal and 100 pounds flaxseed meal. Most of this feed was bought last fall. During the winter, corn silage will be substituted for the beet pulp, the bran will be increased and the oats reduced. Mr. Smiley now has about 100 head of pure bred Holsteins.

The local creamery is paying 44¢ for butterfat in cream.

The grass pasture experiments being conducted on the Experiment Farm at Newell are demonstrating very forcibly the efficacy of irrigated grass pastures on the project. In three years, one pasture has been developed to where it will graze two cows per acre throughout the season. This plat, consisting of a mixture of 20 pounds of Brone grass seed, 12 pounds of slender wheat grass seed and 3 pounds of alfalfa seed, making a total of 35 pounds of seed per acre, is from present indications, the ideal combination. Mr. Aune reports very little danger of bloat on this combination of grasses.

No cattle from the project are ranging on the Black Hills National Forest this year. Range for 1000 head is available. Approximately 30,000 sheep are being ranged on the Indian Reservation, sixty to a hundred miles east, by project farmers; 12-1/2¢ an acre is being paid for this land as a yearly rental. Those renting this land are obliged to build their own reservoirs.

Heavy rains during the early part of the week ending August 10 prevented travel over the project.

On one farm visited lambs were dying of worm infestation. The sheep had been running on the same pasture three successive years. Last year, a few lambs showed infestation by scouring and a general unthrifty condition, though none were lost. This season about half the lambs show infestation and fifteen out of about 340 are dead. Many others are scouring badly and some will be lost. Three post-mortem examinations showed the presence



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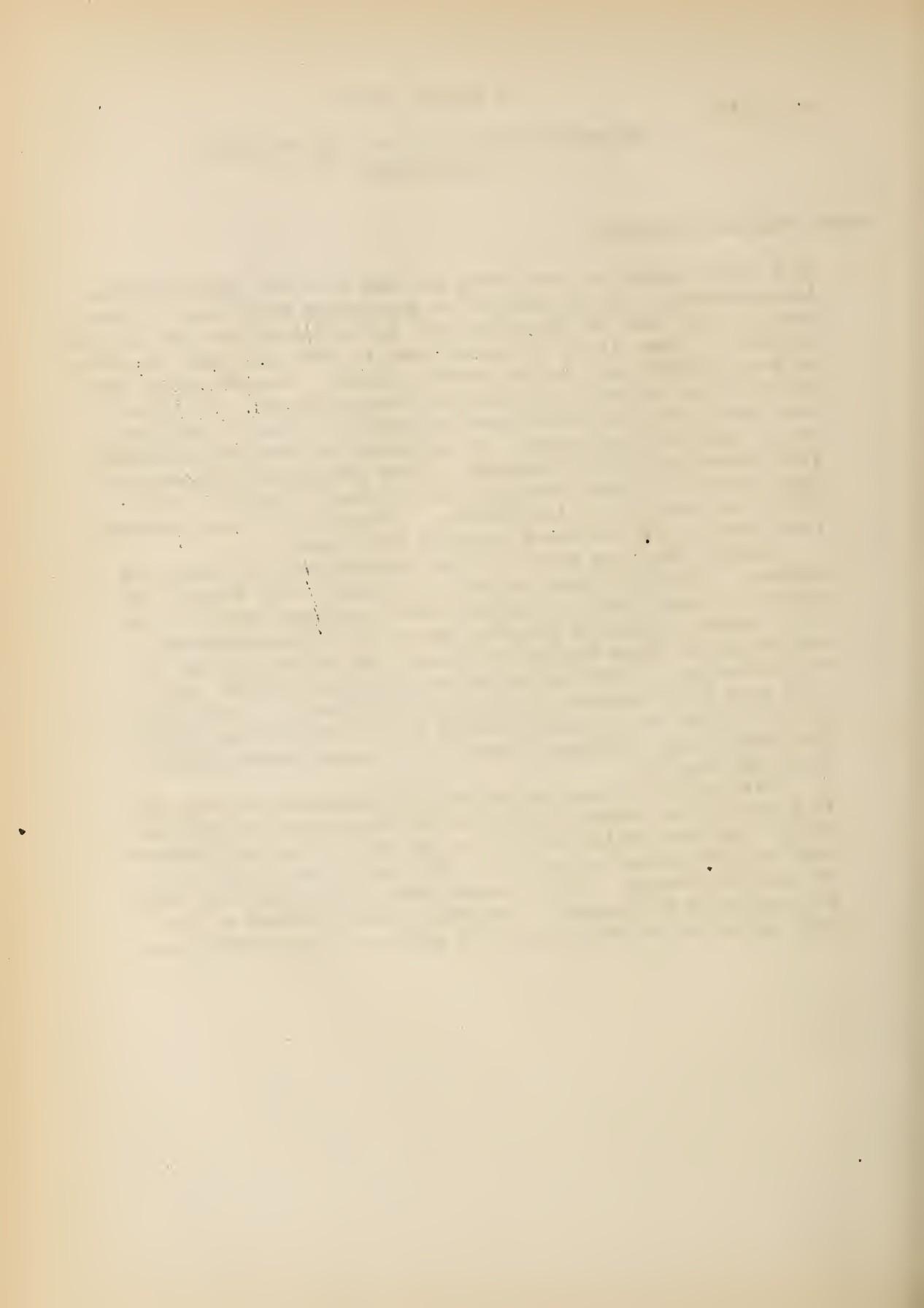
Field Notes.

Belle Fourche (continued).

of a large number of tape worms and but very few stomach worms. Approximately a double handful of tape worms were found in each lamb. This case is rather unusual for a fenced dry land prairie pasture. Also, it is an unusual one in that most lamb troubles on farm pastures are due to stomach worms. In medicating these lambs, a bit of useful information was picked up. As pills were used, some instrument was necessary in order to get them on the back of the tongue. An ordinary ten cent hair curling iron proved a splendid success. This prevented the operator from having his hands scratched on the lamb's teeth. The lambs swallowed the pills readily. Three hundred and twenty-five were caught and dosed in about four hours.

Barley promises to be the most economical feed here this season. Present prices of grains at Newell show barley will sell for about \$2.60 per hundred with a splendid chance to be still lower. This is probably due to the discontinuance of many mills to grind barley for flour, and to the closing of the breweries. Corn is quoted at \$3.65 per hundred; corn mill feed (a by-product) at \$2.60 per hundred. A combination of two-thirds shorts and one-third bran is selling at \$2.00 per hundred and middlings (practically ground screenings) at \$2.50 per hundred.

Millmen on the project expressed themselves as very much in favor of the Bureau of Markets establishing a standard of weight for feed stuffs instead of the two systems of "bushels" and "weight" as now practiced. Some quotations come in as so much per bushel. It is always noted that when such feed is sold it is by weight. The bushel system allows of too much variation in the quantity of grain is their contention.



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WESTERN IRRIGATION AGRICULTURE.

FIELD NOTES.

Huntley.

During the two weeks ending August 10, the maximum temperature was 100, minimum 41, and precipitation .41 inch.

Harvesting of the second crop of alfalfa hay was completed. This crop was cured in a fairly good condition and was damaged only very slightly by rain.

An invasion of the sugar beet web-worm over nearly all parts of the Huntley project has rather seriously damaged the beet crop. This pest can be controlled by spraying with Paris Green, if taken in time, but as it is very unusual for an invasion to occur over a large area, farmers in most cases did not have the necessary equipment to spray at once, and it was necessary to depend on sprayers furnished by the Sugar Company, only one or two of which were available. As a consequence, several fields were badly damaged before the beets could be sprayed.

Harvesting of grain crops is well advanced and some very good yields have been reported.

San Antonio.

During the week ending August 10, the maximum temperature was 101 and minimum 71. There was no precipitation. Reasonably cool and pleasant weather for the season has prevailed during the past three weeks.

The principal field work done was plowing. The following corn plats in the rotation experiments were plowed: A4-4 and 7; A6-8, 10, 12 and 14; B5-1, 2, 14 and 16; B6-2 and 6. Part of the bean varieties on field B4 were harvested. In spite of a poor stand, much the best yield of beans were obtained from the Blackeyed cowpeas. Corn in the wide row experiment on field C6 was harvested, the yields from the various plats ranging from 20.9 to 42.3 bushels per acre. Baling of hay was started on Friday.

Messrs. Norman Lambert, farm clerk, and H. F. Loomis of the Office of Crop Acclimatization and Cotton Breeding, left for Washington the first part of the week. Both expect to enter the military service soon.



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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

Truckee-Carson.

During the three weeks ending August 10, the second crop of alfalfa was hauled and stacked, and the grain varieties on the farm of Fred Sanders were thrashed.

The average yield of the alfalfa hay was 1620 pounds per acre. The average yield of the first crop was 2443 pounds per acre as previously reported.

The total area of the barley varieties was 4.31 acres, the gross yield 7393 pounds, and the average yield per acre, 1715 lbs.

The total area of the wheat varieties was 9.74 acres, the gross yield 21,776 pounds, and the yield per acre 2235 pounds or 37.3 bushels per acre.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

North Platte.

Practically the entire week ending August 10 was spent in the interest of the swine industry on the project. On Monday, a visit was made to a farm at the eastern end of the project, where a large herd of hogs which, while they showed no certain signs of cholera, were in a neighborhood where there had been cholera last year, and the owner decided to vaccinate. On Tuesday, 144 weaned pigs were vaccinated. This man raises from two to three cars of hogs a year. He always markets in September and, in this way, he keeps his pigs for a year or more, running them on alfalfa with about a two per cent ration all through the growing season. He says that his hogs, by this management, eat about seven bushels of corn per 100 pounds of gain.

One day of the week was spent in the interest of the swine exhibit for the local county fair, visiting the hog raisers and encouraging them to make good exhibits of their stock.

Two small bunches of hogs on the eastern end of the project were vaccinated against cholera.

Some of the hog raisers are still having trouble with their hogs getting poisoned by eating the poisoned bran put out for grasshoppers. One good sized bunch were poisoned this week, but they were promptly given sulphur and milk slop and only one hog died.

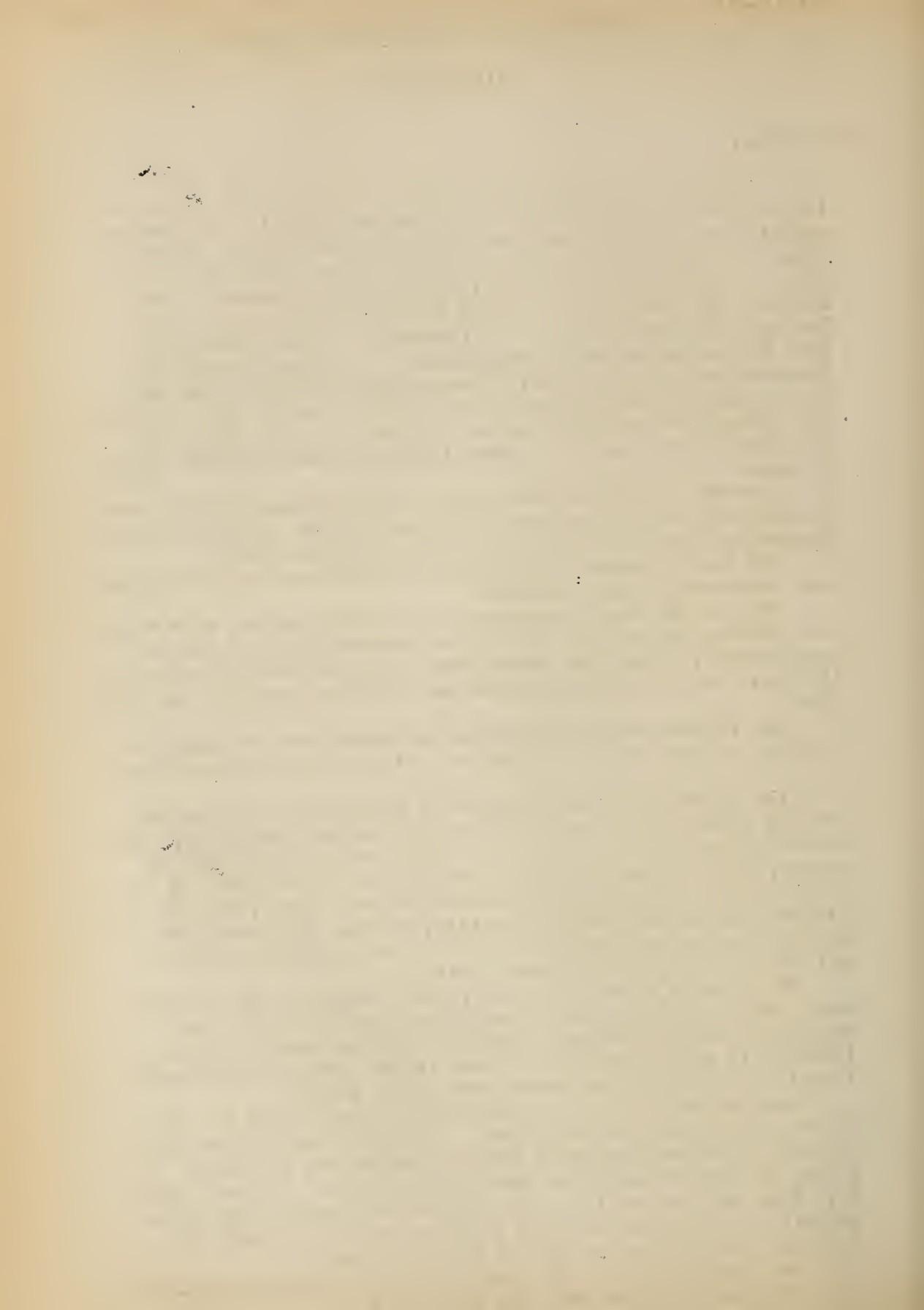
The farmers on the project having dairy cows and hogs are making more money this year than any other class of farmer here.

The entire week ending August 17 was spent on the project working in the interests of the hog and cattle industries. One day was taken almost entirely in working with some of the hog growers and dairymen in making preparations for exhibits at the county fair. The present prospects are very good for large exhibits of both hogs and dairy cattle, and the fair board are trying to encourage these exhibits by giving larger premiums and more of them than in former years.

The cholera situation is improving greatly. For the past week, while several requests have come into the office for assistance in hog diseases, there has been no case of cholera found. If this should be the last of the cholera this season, it will be a great improvement over former years.

Some of the men in the district that were haled out are talking of buying more dairy cows. While the cash crops were ruined, their cows are still paying a profit and they have plenty of feed to take them through the winter. As yet, there have been no silos built on the project this summer, due to the scarcity of labor and the high price of building materials. The corn crop promises to mature well this year.

The Scottsbluff and the Morrill creameries are paying \$0.45 for cream and \$3.00 per cwt. for whole milk.



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WESTERN IRRIGATION AGRICULTURE.

FIELD NOTES.

Yuma.

During the week ending August 10, the maximum temperature was 108, minimum 70, and greatest daily range 23. There was a total precipitation of .48 inch in three showers. Thirty-five acres were irrigated. A part of the deciduous fruit orchard and the seedling fig orchard was summer pruned.

Much of the cotton in the southern part of the Yuma valley is being badly damaged by cotton boll worms. The cotton aphis injury is abasing.

During the week ending August 17, the maximum temperature was 100, minimum 56, and greatest daily range 37. Twelve acres were irrigated.

The first picking of cotton was made from the block of volunteered varieties on field D-17. Twelve varieties of beans were included in a variety test planted on border A-13-4 on the sixteenth.

There has been considerable dying of trees among the plantings of deciduous fruit varieties during the present season. These dead trees were dug out and hauled from the orchard this week.

Many calls have been received during the week from growers of Durango and short staple cotton fields for advice as to irrigating and handling such fields. This has been occasioned by an unusually excessive shedding of the small bolls from these varieties. This loss is so general over the entire project that it is difficult to identify the damage as resulting wholly from either improper irrigation or insect injury. It seems that the extremely high temperatures and hot winds of August 2 and 3 may have damaged all young forms then exposed to such an extent as to produce this general shedding. The Egyptian cottons apparently did not suffer such serious loss of small bolls, but in many fields, seemed to undergo quite a serious shedding of squares. The period of hot weather mentioned was broken on the fourth by a wind and sand storm, and the following period of two weeks has been one of very low maximum temperatures for August and unusually cool nights. Precipitation of a total of .48 inch fell on August 6, 8, and 10. During this time, rains were general over southwestern Arizona, and it was likely due to this condition that the cool weather prevailed about Yuma.

It is recognized that a part of the shedding of this cotton is directly due to the injuries of plant bugs or "cotton stainers". Unless this behavior of upland cotton plants is incorrectly interpreted, the conditions in many ways appear very similar to injury



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Field Notes.

Yuma (continued).

to the setting of orchard fruits which have been recognized by physicists and horticulturists in certain sections and referred to as "electrical wind damage".

Up to the present time, no injury is yet observed to dates from fungous decay, which might be expected from the recent precipitation and heavy dews which still prevail.

San Antonio.

During the week ending August 17, the maximum temperature was 100, minimum 70, and greatest daily range 29. There was no precipitation.

Plowing of corn stubble on the rotation plats was completed. Plats A6-16 and 18 were plowed and plat B6-4 was plowed and subsoiled. Plats B6-8, 10, 12, and 18 were double disked in preparation for winter cover crops. Plowing of field D4 was completed. Sorghum for forage was hauled in from the rotation experiments. The greater part of the time was consumed in baling hay. All hay so far harvested was baled.

Mr. C. E. Trout, of the Office of Corn Investigations, spent two days at the station. He completed the harvest of corn in all of his experiments.

Belle Fourche.

During the week ending August 17, the maximum temperature was 91 and minimum 53. The total precipitation amounted to .59 inch.

During the week, the second cutting of alfalfa in field A was hauled in and all alfalfa plats were irrigated. The oats in the irrigated rotations to be followed by alfalfa were threshed and these plats were seeded to alfalfa and irrigated. The threshing of the wheat and barley in the irrigated rotations, and all the small grains in the dry land rotations, was completed.

The alfalfa in fields I.P. and the New 80 was mowed, raked and cocked.

The following tables show the yields of spring wheat, winter wheat, and barley in the irrigated rotations.



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Field Notes.

Belle Fourche (continued).

Table I.-- Yields of Spring Wheat, 1918.

Rotation Number	Yield per Acre.		Ratio of Grain to Straw.
	Grain, bus.	Straw, tons	
3, .....	12.1	.44	1:1.21
3-a, .....	22.7	.69	1:1.00
7, .....	17.7	.61	1:1.14
7-a, .....	26.1	.82	1:1.05
18, .....	35.3	1.16	1:1.09
28, .....	17.0	.53	1:1.04
48, .....	44.1	1.94	1:1.56
Maximum, .....	44.1	1.94	
Minimum, .....	12.1	.44	
Average, .....	25.0	.88	1:1.16

Table II.-- Yields of Winter Wheat, 1918.

Rotation Number	Yield per Acre.		Ratio of Grain to Straw.
	Grain, bus.	Straw, tons	
5, .....	14.9	.51	1:1.14
5-a, .....	23.6	.69	1:0.98
66, .....	26.5	.79	1:0.99
Maximum, .....	26.5	.79	
Minimum, .....	14.9	.51	
Average, .....	21.7	.66	1:1.04

Table III.-- Yields of Barley, 1918.

Rotation Number	Yield per Acre.		Ratio of Grain to Straw.
	Grain, bus.	Straw, tons	
66, .....	26.8	.60	1:0.93
X, .....	16.8	.34	1:0.84



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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

Belle Fourche (continued).

During the week ending August 24, the maximum temperature was 95 and minimum 48. The total precipitation amounted to .17 inch.

Hauling and stacking of the second crop of alfalfa was completed. Threshing in A., K., and horse pasture was finished, flax was threshed, and seed alfalfa harvested.

The yields of oats in the irrigation rotations ranged from 34.4 to 92.6 bushels, and averaged 73 bushels per acre. Flax yields in the same experiments ranged from 8.7 to 24.1 bushels, averaging 17.7 bushels per acre.

Messrs. Scofield, Chilcott, and Kearney go to North Africa.

A cablegram has been received from France announcing the arrival there, on August 23, of Messrs. Scofield, Chilcott, and Kearney, who are enroute to North Africa on an agricultural mission in response to a request from the French High Commission. The party will visit the French colonies of Algeria, Tunisia, and Morocco, where both irrigation and dry-land agriculture are practiced, to investigate and advise regarding possibilities and methods of increasing the agricultural production of these areas.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

Tieton.

Six calls for assistance were answered, eight farms were visited, and nine conferences were held during the week ending July 27. Two days were spent at Puyallup, Washington, discussing problems of and plans for marketing Yakima alfalfa from grower to feeder, with dairymen and county agriculturists of seven counties.

Yakima alfalfa began selling at \$22.00 per ton baled and loaded on cars and the price has advanced to \$25.00. Local growers were satisfied, generally, with the \$22.00 price. Puget Sound dairymen are facing a serious condition of feed and milk prices and, inasmuch as they are the largest buyers of Yakima alfalfa, there is considerable local interest in their problems, as affecting the demand for hay. The county agriculturist and two Snohomish county dairymen came to Yakima on July 12 and bought 1800 tons of alfalfa at \$22.00. Local hay dealers immediately began talking higher prices, not buying however, and produced a general unwillingness on the part of growers to sell at \$22.00 even though many individuals and the Haygrowers' Association considered this a fair price. Two other delegations of Puget Sound dairymen came to Yakima for hay but the active local dealers kept the higher price talk in the air, buying only enough at these higher prices to supply the immediate needs of the Seattle market which was out of hay, and kept the growers and visiting dairymen unsettled and apart on the price of hay. The dairymen had come from their community organizations with instructions not to exceed certain prices, f.o.b. destination, and found no hay for sale within reach and many growers unwilling to sell at any figure.

In conference with the Yakima county agriculturist, it was decided to go to the Western Washington Experiment Station to discuss the hay situation with dairymen and agriculturists at the annual "visiting days". It was suggested that communities desiring hay make a definite survey of their needs and come quietly to Yakima prepared to buy hay at the going price soon after the second cutting was harvested and baling begun. Suggested terms were, 25 per cent with contract, inspection at loading points, full payment on sight draft to bill of lading. The Yakima Haygrowers' Association and the Grange supported the suggestions and volunteered to be of all possible assistance in promoting direct marketing.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Shoshone.

During the week ending August 10, seventeen farm visits were made, 21 office calls were received, and 5 other conferences were held.

A meeting of the Board of Directors of the Powell Breeding Association was held in this office. Incorporation being completed, a note, signed by the directors, was taken up and a note given, signed by the officers of the corporation.

An article was written for the local papers concerning the purchase of ewes by project farmers this fall. Several farmers are planning to buy old ewes and lamb them out next spring. An effort is being made to organize those who wish sheep and to assist them by locating the kind of sheep desired, and getting prices.

During the week ending August 17, two trips were made to the mountain ranges to inspect ewes which are for sale. One man has for sale one thousand 5-year-old ewes for which he asks \$12.00 per head straight. Another man has about 300 ewes with badly broken mouths for which he asks \$10.00 per head, about 700 head of ewes with slightly broken mouths for which he asks \$12.00 per head, and 300 March ewes, lambs by a Hampshire ram, for which he asks 10 cents per pound. Another man has 1000 head of yearling ewes for which he asks \$16.00 per head, 3000 head of good middle-aged ewes for which he asks \$15.00 per head, and 800 head of old ewes for which he asks \$10.00 per head.

Arrangements were made for the cooperative shipment of 2 cars of cattle next week.

The harvesting of grain and the second cutting of alfalfa are in full swing now. The yields of grain and hay this year are very good as a rule.

Minidoka.

The sheep of the cooperative grazing association are doing remarkably well on the range, far better than last year. This is due to a better condition of the range, as well as to better methods of management. Most of the lambs from the associations will do to ship as market lambs in September.

The fleece wools shipped from the North Side on June 6th, arrived on the Boston market on July 10. A recent report states that it is now being classified and graded. As yet, no returns have been received on any of the consigned wools.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Minidoka (continued).

According to the scale of prices set by the State Farm Markets Bureau, the alfalfa hay of Southern Idaho is to be sold as follows:

Fancy, - - - -	\$15.00 to \$17.50.
No. 1, - - - -	12.50 to 15.00.
Standard, - -	11.00 to 13.50.
No. 2, - - - -	9.50 to 12.00.
No. 3, - - - -	8.00 to 10.50.

The policy of trying to sell this hay according to grade has not met with favor either with the farmers or stockmen. The farmers generally construe the meaning of this schedule at the top prices and the stockmen at the lower. Baled hay is now being sold locally at \$17.00, f.o.b. The hay for wintering the live stock has not yet been contracted for.

Feeder lambs are being held for 14¢, which is from 1 to 2¢ higher than the buyers desire to pay, hence, many are yet unsold. However, the present indications are that 14¢ will be paid at the loading stations. Feeder steers of the best type can be bought at from 9 to 10¢. Because of the fact that practically all the hogs are now raised in small herds, feeder hogs are scarce and can not be bought for less than market prices for fat hogs.

Truckee-Carson.

During the week ending August 17, a trip was made into three adjacent valleys. The trip covered a distance of about three hundred miles and was for the purpose of observing agricultural conditions in these valleys. The principal irrigated territory in the state is included in the three valleys visited, the Lahontan valley, in which is located the Truckee-Carson project, and the Lovelock valley, which adjoins the Lahontan valley. The Lahontan valley has much the greatest irrigable area and is the only valley for which there has been provision made for storing water. The other valleys mentioned are suffering greatly this year on account of a lack of water for irrigation, although ample water has already this year flowed down the streams which provide them with water. The loss of crops in these valleys has caused considerable agitation for the storage of water, and one valley has already under construction an additional canal which is expected to be part of a storage system. Potato growing is a very important industry this year in the



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Truckee-Carson (continued).

three valleys mentioned, and the ranchers who have alfalfa acreage have been induced to permit the potato growers to use the remaining water available to save the potato crop. The yield of alfalfa hay, which is a very important crop in these valleys, will be reduced about one half. This condition is partly responsible for the increased price of hay on the Truckee-Carson project. Another contributing factor is the drought conditions in California. The price of \$16.00 to \$20.00 per ton for hay on the farms was found to exist in the territory visited. These are practically the same prices as are asked locally.

There was very little dairy business carried on in these valleys and the inclination seemed to be a further decrease because of the advancing price of hay.

In one of these valleys visited, a visit was made to the best registered Holstein herd in the State. The bull heading this herd was purchased for \$2,300. Three other bulls of a little less value are also included in the herd. This herd is owned by a man who also owns a ranch on this project and he expects to establish this pure bred herd on his ranch here in September and continue his breeding operations. The local dairy interest will no doubt receive a great stimulus from this importation.

The county agent was visited in one of the valleys and the agricultural conditions were discussed with him.

Uncompahgre.

The greater part of the week ending August 17 was spent in the general work of the office. One day was spent with the county agent of Montrose county and a special agent from the Colorado Agricultural College, who visited the valley to investigate the whorled milk weed. There has been considerable trouble from this weed as a poison to sheep and cattle. There have been many losses on the western slope of the State from this weed in the last few years. It is causing a great deal of concern among the stockmen. The Colorado Experiment Station has been at work during the summer on methods of eradication. It is found in several sections of the project. A meeting has been called by the county agent to get the stockmen interested in the matter of eradication of the weed in Montrose County. It is recognized as a serious menace to the live-



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Uncompahgre (continued).

stock industry in this section.

There are many potatoes being dug and marketed at this time. The yield is very satisfactory considering the stand. The price at present is \$2.10 per cwt.

Much of the wheat is now threshed. The corn crop shows a good yield for silage. There will be close to 25 silos put up this season on the project.

Belle Fourche.

Eight farm calls were made during the week ending August 17. Two herds of fall pigs were found infected with necrobacillosis. One project farmer was assisted in the purchase of one hundred hogs. Of this number, 56 were fall pigs from one to three weeks old, 8 sows, the mothers of the pigs, and 36 spring pigs. The lot were bought at 20¢ per pound.

A census of the July cream sheets from the stations on the project and the creamery at Belle Fourche shows 608 farmers producing cream. This includes the farmers on the project and those farmers near Belle Fourche under the Johnson and Redwater canals. This total will be considerably augmented as fall approaches. The cream stations on the project ship to Mitchell, South Dakota, and to Omaha. The creamery at Belle Fourche is now paying 47¢ and the stations are paying 44¢ for butterfat in cream.

Many carloads of grass cattle from the range within a radius of 100 to 250 miles have been shipped from Belle Fourche during the past week. In the absence of the young men, the young ladies are bringing the cattle in. Cattlemen report they are as good as the boys.

Sheep men on the project and on the range reported considerable loss from parasitic infestation during the week ending August 24. Large and small tapeworms appear to be causing the greater part of the trouble. One range man reported 500 lambs with scours at one time. The general opinion is that the season has been especially favorable for parasites. Gadfly larvae (*Cenurus Cerebralis*) was found in one sheep during the week. Slow sale of feeder lambs is reported up to date. Abundance of feed on the project would indicate large feeding operations this fall and winter. Feeder lambs are considered high; hence, they are not being bought up rapidly.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Belle Fourche (continued).

Three dairy farms on the project are now equipped with Hin-men milkers and the owners are well pleased with the results. 47¢ for fat is being paid by the local creamery. Cream stations are paying 44¢.

57 cars of grass cattle were shipped from the Belle Fourche yards Saturday, August 24th.

Eleven farm visits were made during the week and two office calls were received.



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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES.

San Antonio.

During the week ending August 24, the maximum temperature was 101, minimum 70, and greatest daily range 31. A shower amounting to 1.13 inches precipitation occurred on Saturday afternoon and night. The rainfall in the city at the same time was more than 3 inches. This rain was rather general over southern Texas and should help late forage crops and pastures. It is doubtful if it will be of much benefit to cotton.

The principal field work was picking cotton. The first picking in the rotation experiments was completed. Picking of the variety test, time of thinning experiment, plant spacing experiment, and co-operative series was accomplished. The yields were very low. The yields in the rotation experiments were the lowest since the experiments were started. The average yield from the 30 plats in these experiments was at the rate of 213 pounds of seed cotton per acre. The highest yield from one plat was at the rate of 532 pounds per acre and the lowest was at the rate of 64 pounds per acre. A large proportion of the cotton was open at the time of the first picking. The low yields were due primarily to drought, as there has been very little boll weevil or other insect damage. The reasonably abundant soil moisture provided by the rains during May caused vigorous plant growth and prospects during June were very encouraging. On account of the extremely dry winter, no reserve moisture was available below the second foot. The drought during the latter part of June resulted in heavy shedding of squares and small bolls, and even though the plants were larger than last year, a low yield resulted.

Corn stalks on field A3 were cut and the field was plowed. Stover from the sorghum varieties on field C6 was hauled in. Roads were cultivated and weeded. Soil samples were taken on the cotton plats in the rotation experiments.

Yuma.

During the week ending August 24, the maximum temperature was 103, minimum 56, and greatest daily range 41.

Forty-six acres were irrigated.

Nearly all hand labor was kept busy through the week with miscellaneous hoeing of crops and in orchards. Orchards and tree plantings on the following borders were cultivated: A16 to 21; B22 to 32; C42-45, and F1.

All alfalfa plats were harvested late in the week for the fourth cutting of hay. The soy beans that were being grown on borders C33



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WESTERN IRRIGATION AGRICULTURE  
Field Notes.

Yuma (continued).

and 34, which are under a plat variation test, were harvested on the 21st. and 22nd.

Feterita was planted on field A23 and grain sorghum varieties on plats C22 and 23, D38 to 41, and E5 to 8.

Complete notes were made as to the quality of fruit on trees of the seedling hybrid fig orchard that are bearing this year. The row of eucalyptus trees around the edge of the farm road were pruned of excess low growth.

Truckee-Carson.

During the two weeks ending August 24, the hog millet on plats C2 and C3 was harvested. Yields were as follows:

Plat	Area, Acres	Acre yield, pounds	Yield per acre, pounds
C2.....	.19	222	1170
C3.....	.35	193	772

The soil on which the millet was grown was rather alkaline and not suited to the profitable production of most farm crops. These plats were in sweet clover pasture in 1917.

The corn on plats D2, E3, E4, E5 and F16 were cut for silage August 22, 23 and 25. The yield of each plat follows:

Plat	Yield per plat	Area, acres	Yield per acre, pounds.
D2.....	3085	.38	8120
E3.....	6075	.58	10500
E4.....	3775	.59	6400
F4.....	1935	.25	7740
F16.....	3095	.25	12380

The silo was found to hold all of the corn except that from F24, its capacity being about 8 tons.



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Field Notes.

Truckee-Carson (continued).

Alkali Reclamation Experiments on Field Y.

The second crop on Field Y was harvested and stacked. Results obtained are shown in the table below. They indicate that, in general, all the treatments were beneficial.

Plat No.	Treatment	Yield	Average yield, treated plat	Increase over adjacent check plats
Y 1	Tile, gy., man., sweet clover....	420		
2	Check.....	250	405	155
3	Tile, gyp., man., sweet clover...	390		
4	Tile, gypsum, manure.....	285		
5	Check.....	625	625	0
6	Tile, gypsum, manure.....	965		
7	Gypsum, manure.....	1020		
8	Check.....	780	905	125
9	Gypsum, manure.....	790		
10	Gypsum.....	550		
11	Check.....	50	345	295
12	Gypsum.....	140		
13	Tile, gyp., man., sweet clover...	200		
14	Check.....	50	150	100
15	Tile, gypsum, man., sweet clover	100		
16	Sulphuric acid.....	100		
17	Check.....	0	95	95
18	Sulphuric acid.....	90		



## DEMONSTRATIONS ON RECLAMATION PROJECTS.

## FIELD NOTES.

Tieton.

Six calls for assistance were answered during the week, 20 visits were made, and 5 conferences were held during the week ending August 3. Five pig feeding demonstration weighings were made, three of which began pea feeding.

The Cowichee Creamery Company at Cowichee is feeding whey to pigs on quite an extensive scale. The pigs are purchased in the Cowichee and Tieton Districts as stockers and are of varying grades and weights. The feeding operations are carried on in four main lots. Lot 1 receives a thin slop of whey with a minimum amount of ground feed. Lot 2 receives a slop in which the percentage of grain is increased to form a medium thick slop. Lot 3 receives a heavy slop of whey carrying a maximum amount of grain. Lot 4 is finished on dry grain, corn or barley supplemented with tankage, in a self-feeder. Pigs are moved from Lot 1 to 4 according to their size and degree of fleshing and are placed in lot 4 at approximately 180 pounds and as prime feeders. At the present time Lots 1, 2 and 3 are foraging some no-irrigated wheat, sweet clover and weed land and are receiving what whey they will drink nicely. Nineteen pigs were weighed into lot 4 to be finished on cracked corn and tankage in self-feeders. Plans were made to undertake a detailed study of the value of whey in growing and finishing pigs as soon as the available forage is consumed and the pigs returned to lot wherein definite check on total feeds can be made. This data will be of value to farmers in the two cheese factory districts and will also stimulate the cheese industry by the demonstration of the value of whey as a by-product and the swine industry by demonstrating that farmers delivering milk to cheese factories and selling stock hogs are making an unnecessary division of profits.

Feed prices, retailers to consumers, at this time are as follows:

Barley middlings, \$68.00 ton.....good quality.

Barley bran, \$34.00 per ton.....Hulls, very inferior.

Cow feed, \$52.00 ton.....Wheat screenings, ground corn, cocoanut oil meal and barley meal. Quality fair.

Cocoanut oil meal, \$57.00 ton.... Said to be 90% protein.

Eastern corn, \$71.00 per ton.... Quality inferior.

Chop corn, \$73.00 per ton..... From Eastern corn.

Rolled barley, \$69.00 per ton.... Appears highly fibrous.

Ground barley and corn, \$60 ton... A limited supply of good quality and being rapidly placed in large lots.



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DEMONSTRATIONS ON RECLAMATION PROJECTS  
Field Notes.

Tieton (continued).

Produce prices to farmers are as follows:

Alfalfa hay.....\$25.00 per ton baled and loaded on cars.  
Butter-fat in cream..52 cents per pound on the farm.  
Butter-fat in cream..54 cents per pound delivered in Yakima.  
Butter-fat in cream..60 cents per pound, average on the farm.

Two calls for assistance were answered during the week ending August 10, and 13 farms were visited. Parts of two days were spent in Spokane county with county agriculturist Shinn in studying the pea crop problems and in some assistance in the construction of a continuous wooden hoop silo of the type developed on the Tieton. One day was spent at the Washington State College at Pullman in conference with department heads with whom cooperative work has been done or is planned for the Tieton.

Pigs which were turned into pea fields or which went upon a pea ration on August 1 have undergone the usual rapid improvement in thrift and fleshing. This rapid development obtained by the pea ration is appreciable factor in attracting attention to the value of peas in pork production.

County Agriculturist Shinn of Spokane county is engaged in a campaign to secure stocker hogs and place them in the pea fields after harvest. He has made "field counts" of shattered peas after the crop has been harvested and removed and finds from 200 to 700 pounds of shattered peas per acre of stubble land. In previous years hogs gleaning these stubble fields have averaged approximately 100 pounds of gain per acre. Spokane County needs 10,000 stock hogs, according to a circular letter sent out by Mr. Shinn to districts where feed is scarce and high priced, to glean the pea stubble fields. They are also used to some extent on wheat stubble fields. This situation emphasises the value of peas in pork production and is an index to the possibilities of the utilization of this crop under irrigation for hogging-off purposes. Peas have not yet been grown for seed or grain purposes on the Tieton-the entire limited acreage having been used for hogging-off or feeding from stacks or cocks. Spokane valley orchardists grow a considerable acreage of peas under irrigation but these are used principally for green manuring and only a limited amount of information and observation in regard to irrigation practices in the production of the pea crop where the grain was principally desired could be secured.

Dr. Kalkus of the Washington State College who has had charge of feeding investigations at the Okanagan Sub-station where the problems of hairlessness in pigs, goitres and structural malforma-



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Tieton (continued).

tions in colts, calves, lambs and kids has been a major project for the last three years is now prepared to undertake demonstration and educational field work in this regard. It is planned to secure his assistance in reducing losses of pigs and calves on the project.

Conferences were held at Pullman with State Director of Markets Hobson in regard to the plans and systems of organization and operation of dairymen, alfalfa growers and potato growers; with Prof. Kraeger in regard to lectures this winter on Rural Education; with Prof. Sievers in regard to crops and soils problems and with Director of Extension Thernber in regard to cooperation with dairy and live stock specialists in his office, particularly in regard to demonstration work in dairying.

Baling the alfalfa crop is now under way and the second cutting is practically all in the stack. The price remains at \$25 per ton with less activity in buying. The potato market has opened with a few sales between \$40 and \$45 per ton.

The fruit men are enjoying their combination of a generally good crop and good prices. Cherries averaged six cents per pound, apricots were scarce and sold for four cents per pound and the pear market is active with contract sales to the Libby, McNeil and Libby Cannery at \$32.50 per ton and shipping pears ranging as high as \$50, per ton.

Uncompahgre.

Twelve farms were visited during the week ending August 24, and calls were received from 10 sources.

The greater part of the week was spent in connection with the work of the eradication of the whorled milkweed. This was in co-operation with the County Agriculturists office and the fieldman Mr. May of the Colorado Agricultural College. The weed is found in several parts of the Project and the cooperation of the stockmen is being solicited to prevent its spread into the hay fields. So far this has not been found to any extent in the hay fields of the county. As the weed is a perennial plant it is quite difficult to eradicate.

Much interest has been shown in the matter. The experiment station at Fort Collins has found that one pound of the dried weed is sufficient to kill ten sheep. No trouble to speak of has been had locally in the way of large losses. In the southern part of the State, 750 head of sheep were poisoned in 24 hours. There have been other losses of sheep and cattle which makes it quite a serious problem.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Uncompaghre (continued).

Some work has been done regarding the feeding problem this fall. Much low grade wheat is found in the valley which is of low milling quality. An attempt is being made through the State Council of Defense to get permission to feed a portion of this on the farms. The outside feed such as corn, is too costly to feed this year so that it is felt that in order to save the hog industry to the farmers a request of this nature is justified.

The pigs in the Oak Grove Pig Club were weighed on Saturday.

Three days of the week were spent at Salt Lake City, Utah, in attendance at the Third Annual Ram Sale. The offerings came mostly from western breeders and close to 5,000 sheep were on the grounds, practically all of which sold through the sales ring.

The general interest among the western breeders was in favor of the Rambouillet breed. Several animals brought exceptional prices. The highest price being \$6200. This ram was owned by John Suly, of Mount Pleasant, Utah, and sold to C. N. Stillman, of Sifurd, Utah. The rams of the Rambouillet breed were much in demand and the largest number of breeders were interested in this breed.

There was the usual interest in the Cotswold and Lincoln rams. Many of the breeders being interested in these long wool breeds for crossing on the short wools.

The interest in Hampshire sheep was not nearly so keen as it was two years ago. The offerings of this breed was excellent, but the main criticism heard from the range men was in regard to their poor herding qualities, requiring more labor to handle them on the range. This, with the higher price for wool is causing this breed to wane in popularity. The general feeling in regard to the Hampshire was that they will always be popular where early lambs are wanted for market. There were a few offerings of eastern and imported rams. The western breed stuff, however, was most in demand on account of the size. The range rams sold well and were widely distributed over the west. Utah, Idaho, and Wyoming received the largest proportion of rams. A few excellent flocks of ewes were sold at prices ranging from \$40 and upwards.

The farmers on the project are assisting very materially in fighting the milkweed.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Shoshone.

During the week ending August 24, a cooperative shipment of 2 cars of 54 head of cattle was made, with 17 men cooperating in the shipment.

A trip was made to Billings to investigate the cattle market there, to look for breeding ewes, and to confer with men who handle Powell creamery butter. One man said that ewes could be secured at eight cents per pound and this is being investigated. The packing house in Billings does not seem to be doing very well.

Twelve men who wish to purchase breeding ewes were taken to Cody to see some ewe lambs and old ewes which are for sale. No purchases were made but are being considered.

North Platte.

During the week ending August 24, a number of farms on the project were visited for hog diseases and various ailments were found but there were no cases of hog cholera. The interest in the hog industry is better now than it has been at any time during the spring or summer, due, I think, to the success that has attended the business this summer and also to the high prices paid for pork. There are a number of men in the valley now making inquiry for stock hogs but there are very few stockers being offered for sale.

Some of the farmers are now making inquiry for dairy cows and the interest in dairying seems to also be on the increase. Quite a few of the farmers interested in dairying are planning on making exhibits at the County Fair this year. One of the farmers milking a number of cows, who began keeping records early this spring on a few good ones and several scrubs have now five head of red cows left out of the original 32 red ones and has 28 good Holstein cows in their place. These poor red cows were sold to the butcher.

Some time was given at odd moments to making preparations for the live stock exhibit at the County Fair to be held next month.

Belle Fourche.

During the week ending August 31, 3,000 lambs were offered at Omaha market prices less the freight and twelve hours shrinkage. Several buyers from the corn belt are on the project and will probably take a few thousand lambs with them. No sales are yet reported. A large number of range lambs are still showing results of heavy parasitic infestation.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Belle Fourche (continued).

The grazing rates for live stock in the Black Hills National Forest Range are as follows:

	<u>Cattle</u>	<u>Horses</u>
Yearlong, beginning May 16, 1918.....	.68	.85
Summer, May 16 to November 15, 1918.....	.41	.51
Winter, November 16, 1918 to May 15, 1918....	.41	.51
<u>Sheep</u>		
June 16 to September 30, 1918.....		.06-1/2
<u>Swine</u>		
June 1 to November 30, 1918.....		.30-1/2

Meetings over the project will soon be arranged for the discussion of the utilization of the National Forest Range by project farmers. An article relative to this will appear in the papers on the project during the week ending September 7.

Interest is increasing in the cooperative grazing possibilities in the National Forest. Records in the office of the Black Hills Forest Service, Deadwood, S. D., show a remarkably light loss from poison weed and disease. Out of a total of 32,000 head of cattle grazed last year but seventeen head were reported lost from poison weed. Out of the same total grazed but eleven were reported lost from disease. Blackleg claimed most of these. No record of loss due to straying or theft is available. Where proper care was given the cattle during the season, very few cattle were missed at the close of the grazing season.

The office of the Forest Service is very much gratified over the results obtained from a new salting method tried out this year. Instead of allowing the owners to salt their cattle wherever they chose to do so, official salting places were designated by the rangers and marked with a permanent sign board for each herd of cattle. The rangers could much more easily keep up with who was properly salting their cattle and at the same time eliminate the many complaints from various cattlemen who claimed that the other fellow's cattle were getting the salt placed for their cattle. The cattle were much easier controlled, salting troubles were eliminated and the owners are much pleased. The system is so satisfactory and has given such universal satisfaction that it will be continued as a permanent policy.



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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES.

Huntley.

During the week ending August 31, the maximum temperature was 94, minimum 40 and precipitation .70 inch.

Threshing of barley from Field A-IV, of barley varieties from Field O-I, and of oats and wheat in the irrigated rotations, was completed. Barley (variety Trebi) was grown as a nurse crop with alfalfa on 12 one-quarter acre plats in Field A-IV. This field was cropped to grain in 1916 and 1917 and was broken up from alfalfa previous to planting the first crop of corn in 1915. Seed bed preparation consisted of plowing in the fall of 1917 and double disking, harrowing and leveling immediately before seeding in the spring of 1918. Seeding rate of barley was 2 bushels per acre. A very good stand of alfalfa was secured. The crop was irrigated three times during the season on the following dates: June 13, July 8 and August 26. Yields of barley secured are given in the accompanying table.

Barley Varieties, Field O-I, 1918

A test of varieties of barley was conducted in duplicate on 11 one-quarter acre plats in Field O-I in 1918. This field was broken up from native sod in the fall of 1917, and was prepared for seeding in the spring of 1918, by cross double disking, harrowing and leveling immediately before seeding, which was on May 18. The seeding rate of each of the varieties was 2 bushels per acre. All of the plats were irrigated uniformly twice during the season, on June 18 and July 14. The yields secured are given in the accompanying table.

Yields Wheat - Irrigated Rotations - 1918.

Plat No.	Rotation number	YIELD.		
		Per plat	Per acre	Total Grain and Straw.
				Pounds
K-I-7	5-A	396	26.4	815
-8	6A (straw ret'd)	365	24.3	1010
K-V-3	18	531	35.4	1235
-17	28	242	16.1	505
-23	3	260	17.3	545



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Field Notes.

Huntley (continued).

## Yield of Oats - Irrigated Rotations - 1918.

Plat number,	Rotation number	YIELD		
		Per plat	Per acre	Total Grain & Straw Pounds
K-III-5.....	61	951	118.9	5680
-11.....	60	1016	127.0	8160
-14.....	31	692	86.5	5400
K-IV - 5.....	25	740	92.5	5280
- 7.....	42	826	103.2	6700
-12.....	44	744	93.00	6420
-16.....	30	641	80.1	4340
-19.....	32	510	63.8	3780
K - V - 2.....	16	651	81.4	5140
- 7.....	22	791	98.8	5520
-10.....	24	747	95.4	4920
-15.....	23	637	79.6	5760
-18.....	28	396	49.5	3080
-19.....	27	609	76.1	4840
-21.....	1 C.C.	364	45.5	2420

Yields of Barley, Field A-IV, 1918

A-IV- 1.....		1039	86.6	1700
2.....		945	78.7	1588
3.....		1147	95.6	1832
4.....		1003	83.6	1770
5.....		981	81.7	1774
6.....		1173	97.7	2100
7.....		1267	105.5	2500
8.....		1151	95.9	2090
9.....		1244	103.7	2200
10.....		1204	100.3	2410
11.....		1332	111.0	2520
12.....		1159	96.0	2150
Average.....		1137	94.7	



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Field Notes.

Huntley (continued).

Yield of Barley - Field O-I.

Plat No.	Variety	YIELD.		
		Per plat	Per acre	Total Grain & Straw Pounds
		Pounds	Bushels	
O-I-1.....	Chevalier.....	487	40.6	1490
-2.....	Smyrna.....	706	58.8	1325
-3.....	Svanhals.....	662	55.3	1600
-4.....	Hannchen.....	924	77.0	1810
-5.....	Trebi.....	848	70.6	1395
-6.....	Chevalier.....	989	82.4	1255
-7.....	Smyrna.....	784	65.3	1310
-8.....	Svanhals.....	560	46.6	1095
-9.....	Hannchen*.....	259	30.8	710
-10.....	Trebi.....	821	68.4	1395
-11.....	Trebi.....	870	72.5	1440
Avg. 2 plats..	Chevalier.....		61.5	
" 2 " ..	Smyrna.....		62.0	
" 2 " ..	Svanhals.....		50.9	
" 2 " ..	Hannchen.....		53.9	
" 3 " ..	Trebi.....		70.5	

\* 1.75 acres.



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WESTERN IRRIGATION AGRICULTURE  
Field Notes.

Huntley (continued).

Yields Alfalfa, 1st. and 2nd. Cutting - Irrigated rotations.  
1918.

Plat number.	Rotation number	Year	Yield per plat		Yield per acre	
			First Crop Pounds	Second Crop Pounds	First Crop Tons	Second Crop Tons
K-II-1 .....	67	1	630		1.26	
2.....	67	2	1144	610	2.28	1.22
K-III-1.....	61	1	620		1.24	
2.....	61	2	1200	760	2.40	1.52
3.....	61	3	1488	945	2.97	1.88
7.....	60	1	650		1.30	
8 .....	60	2	1132	720	2.26	1.44
9 .....	60	3	1244	780	2.48	1.56
K-IV- 3 .....	40	1	480		.96	
- 4.....	40	2	1118	710	2.23	1.42
- 9 .....	42	1	670		1.34	
-10.....	42	2	1110	860	2.22	1.72
-13.....	44	1	346	430	.69	.86
-14.....	44	2	1090	620	2.18	1.24
K-IV-22.....	8	7	1054	870	2.10	1.74
L-IV-10.....	46	2	1488	1040	2.96	2.08
-11.....	46	1	596	620	1.19	1.24
-14.....	8-A	3	1510	1050	2.02	2.10
-16.....	64	1	598	600	1.19	1.20
-15.....	64	2	1298	1000	2.59	2.00
-20.....	64	3	1530	1060	3.06	2.12
-23.....	69	1	610	700	1.22	1.40
-22.....	69	2	1494	920	2.98	1.84

San Antonio.

During the week ending August 31, the maximum temperature was 99, minimum 71 and greatest daily range 26. The rain the last part of the preceding week started growth of such crops as were not already completely dead. A large proportion of the sorghum plants appear dead and will not start new growth. Cotton has improved somewhat in general appearance, but it is not believed the yield will be materially affected.



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Field Notes.

San Antonio (continued).

The land had dried sufficiently by Tuesday to start harrowing. All fallow rotation plats and other fallow fields were harrowed. Orchards were cultivated. The pasture in the rear of the barn and corrals was plowed in preparation for seeding to winter oats for pasture. Picking of cotton from increase progenies and pure seed fields was continued.

Belle Fourche.

All threshing is completed except variety grains, and this will be done as soon as weather conditions permit.

During the week ending September 7 the maximum temperature was 85, minimum 39, and precipitation 1.01 inches.

A small pit silo, 9 feet in diameter and 12 feet deep was dug, and the cement work partly completed.

The plowing on the dry land rotations is completed and some grain plats in the irrigated rotations have been plowed.

Eight lambs were turned into the corn on rotation 71 on the 6th.

The prospects for a corn crop this year are very good, both on the dry and irrigated lands. If the frost holds off for another 10 days all corn should be ripe.



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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

Belle Fourche (continued.)

Alfalfa Yields, Field A, Second Cutting, Belle Fourche  
Experiment Farm, 1918.

Plat No.	Rot. No.	Spr. seeded alfalfa	Fall-seeded alfalfa	Old Alfalfa.	
		Yield per plat	Yield per acre	Yield per plat	Yield per acre
		Pounds	Tons	Pounds	Tons
A-I - 1*...	40	250	1.00	...	...
2*...	40	...	...	...	400
5*...	42	220	.88	...	...
6*...	42	...	...	...	340
12 ...	60	470	.94	...	...
13 ...	60	...	...	...	800
14 ...	60	...	...	...	750
51 ...	8	...	...	...	820
A-II - 3 ...	46	...	...	490	.98
4 ...	46	...	...	...	750
10 ...	62	450	.90	...	...
11 ...	62	...	...	...	640
12 ...	62	...	...	...	680
16 ...	61	450	.90	...	...
17 ...	61	...	...	...	700
18 ...	61	...	...	...	610
19 ...	48	...	...	470	.94
20 ...	48	...	...	...	820
29 ...	69	...	...	480	.96
30 ...	69	...	...	...	730
A-III-16 ...	65	...	...	520	1.04
17 ...	65	...	...	...	680
19 ...	44	...	...	600	1.20
20 ...	44	...	...	...	800
23 ...	8b	...	...	...	840
24 ...	8a	...	...	...	910
34 ...	71	...	...	720	1.44
35 ...	71	...	...	...	790
46 ...	64	...	...	510	1.02
47 ...	64	...	...	...	780
48 ...	64	...	...	...	630
Maximum.....		500	1.00	720	1.44
Minimum.....		440	.88	470	.94
Average.....		462	.92	541	1.08
					748
					1.50

\* Plats A-I-1, 2, 5, 6, are only 1/8-acre in area. In computing average plats weights they are multiplied by two.

Plats A-II-10 and 16 were mixed in weighing. Half of total weight was credited to each plat.



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WESTERN IRRIGATION AGRICULTURE  
Field Notes.

PERSONAL

Mr. G. A. Wood has been transferred to the Office of the Chief of Bureau, effective September 9, 1918. Mr. F. R. Ellis will assume Mr. Wood's duties in conjunction with his present duties with the Office of Demonstrations on Reclamation Projects.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Tieton.

Five calls for assistance were answered during the week ending August 17, 30 farms were visited, and 5 conferences were held. A meeting called by county agriculturist Price and State Dairy Specialist Musser at the Terreance Heights school in Moxee, in regard to the organization of a bull association block was attended. A trip was made with Mr. Fraser, a Tieton rancher, to the pea-barley and corn hogging-off demonstrations on Mr. Lewis' farm.

The bull association proposition on the Tieton and in other parts of the valley is still in an unsettled condition. The attempt to organize a block in the Moxee failed at this time, due to the uncertainty that two of necessary herds would stay in the valley. No opportunity is overlooked by the County Agriculturist or this office to advance the idea of cooperative breeding and there is reason to be hopeful of the outcome.

Several herds were visited this week and arrangements made with 3 of them to submit to the tuberculin test to be administered by Dr. Martin of the State Department next week.

Butter-fat in cream advanced to 54 cents per pound on the farm this week in accord with the coast advance to 56 cents. Prices for whole milk on a butter-fat basis range from a six to an eleven cents premium for butter-fat over the cream price.

One load of prime pigs averaging 195 pounds sold at \$18.75 per cwt. at the local market this week. The demand for well finished stuff is good and the buyers will pay over the \$13 per cwt. quoted price if the finish is good. The cow market is very dull, there being liberal offerings and no really established price for "trading" dairy cows as yet. There is a limited demand for good dairy cows which will probably increase if the price of butter-fat continues the forecasted advance during the fall months. Few but inferior cows have been sold at this time.

Truckee-Carson.

During the week ending August 31, 26 calls for assistance were received, and 15 farms were visited in response to calls. Definite arrangements were made for building a modified type of Gurler silo on the farm of Mr. Kallenbach. Mr. Kallenbach had planned to build a concrete silo earlier in the season and had planted corn and Russian sunflowers with which to fill the silo, but because of lack of time and inaccessibility of materials the silo building was practically abandoned. After the plans for a Gurler silo were explained, and the possibility of getting a silo of this type built before frost, arrangements were finally made for the building of a Gurler silo.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Truckee-Carson (continued).

Upon investigating the availability of materials it was found that no half-inch lumber suitable for sheeting the silo could be secured. After carefully considering the matter it was decided to build a modified type of the Gurler silo according to the following plan:

The inside diameter of the silo will be fourteen feet. The foundation will be three feet in the ground, one foot above the ground, thus giving a four foot depth to the silo below the structure. Resting on the foundation and bolted to it will be a double circular plate, sawed from inch lumber. Nailed to this plate will be a 2x6 studding set on 16-inch centers. This section of studding will be 16 feet high. A second double circular plate will cap this first section of studding. The second 16 feet of studding will rest on this second plate. It is expected that this middle circular plate will add reinforcement to the silo and facilitate construction. The studding will be lathed on the inside with house lath of extra quality, the lath being placed closer together than for house building purposes. On top of these laths will be nailed inch mesh poultry netting. This surface will be covered with two coats of cement, and when dry will be painted over with one coat of asphalt. It is expected that the coating of asphalt will fill up any cracks that might come in the plaster, and also prevent moisture from going through the cement plaster and reaching the lath. Iron bands will be used on the outside of the silo as additional protection against outward pressure. This type of silo will admit of quick construction and be relatively inexpensive and long lived for this section.

A further report will be made on the construction and cost at a later date.

Shoshone.

During the week ending August 31, 5 milk samples were tested for one man.

A meeting of the directors of the Shoshone Breeding Association was held in this office to arrange for incorporation of the association. This association owns a Shire stallion which was bought from Truman at the same time that the Powell Breeding Association bought two Percheron stallions from the same firm.

Returns were received from the cooperative cattle shipment which was made last week. Cows sold for \$7.25 per cwt. to \$10.25; steers, \$7.50 to \$9.50; Holstein bull sold for \$7.75 and a calf and 4 yearlings sold for \$7.00. The cattle were sold just a week after they



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Shoshone (continued).

were shipped and the expense of shipment was slightly over 80 cents per cwt.

A trip was made with one of the project farmers to see a band of sheep on the range. None of the farmers have so far bought sheep but careful investigations are being made and it is likely that some will be bought soon, though the farmers are holding off because they expect a decrease in prices.



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WESTERN IRRIGATION AGRICULTURE.

FIELD NOTES.

San Antonio.

During the week ending September 7, the maximum temperature was 100, minimum 54, and greatest daily range 29. The weather was cool and pleasant throughout the week.

The principal field work was picking cotton and weeding. Picking of cotton on Field AB-8 was completed and picking of cotton on field C5 was continued. Rotation plats were weeded. Fields B4 and C4 were also weeded. Sorghum on plats A4-12 and 16, B4-12 and 13, and B5-6 and Sudan grass on plats A6-17 and B4-15 were cut and raked.

Mr. H. B. Riley, who has been employed here for several years by the Office of Crop Acclimatization and Cotton Breeding, left the first part of the week to enter the Kansas State Agricultural College.

During the week ending September 14, the maximum temperature was 99, minimum 57, and greatest daily range 36. There was no precipitation and it is getting very dry again. Nothing is making any appreciable growth.

The principal field work was picking cotton and weeding. Picking of miscellaneous cotton experiments was continued and fallow fields were weeded. Seed corn was shelled and milo seed was moved to the seed house and fumigated. Hauling of manure for the rotation experiments was started.

Truckee-Carson.

During the three weeks ending September 14, detailed work has been performed as follows: Plats D1, 2; E1, 2, 3, 4, 7; B7, 8, 11, 12, 13, 14 and 15 were plowed. Weeds have been cleared and burned from roadsides and ditch banks.

An estimate of the percentage of stand of potatoes in the eel-worm experiment indicates that the treatment by heat did not materially affect the stand. In 1917, the prolonged treatment by heat was found to have affected the germination to a marked degree.



21 September, 1918.

## DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Shoshone,

During the week ending September 7, a cooperative sale of a car-load of stock hogs was made to a Nebraska farmer, 15 farmers cooperating in the sale. The buyer received the hogs and paid \$16.50 per cwt. for them delivered at the Powell stock yards. A local buyer had been paying \$15.00 per cwt. for the same kind of hogs.

Practically all of the hogs on the project will be sold for stockers this fall but most of the men wish to run their hogs on their grain stubble for about a month after they thresh.

Uncompahgre.

The greater part of the week ending September 7 was spent in attendance at the Denver Ram Sale and in assisting local farmers in buying and selling sheep.

The sale at Denver was the first one held at that place and although it was a success, it was not quite up to the standard of the sale at Salt Lake City.

The offerings of lambs at Denver was largely from the eastern breeders, with a good representation of range sheep.

The Downs sold with a little more interest at Denver than at Salt Lake City. The heavier wooled sheep were, however, most in demand. The Rambouillet coming from the east did not sell quite as well as the western grown stuff. There was a good demand for range rams, which sold a trifle lower than was true at the Salt Lake City sale. The results from the Denver sale will be most beneficial. There are many good rams needed in Colorado among the range herds and an opportunity was given the sheepmen to get registered rams.

There was a total of about 3,000 rams at the Denver sale and all of the western breeds were represented.



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DEMONSTRATIONS ON RECLAMATION PROJECTS  
Field Notes.

Belle Fourche.

During the week ending September 7, inquiry was received from the County Agent of Lawrence County at Spearfish, S. D., relative to project breeders of pure bred stock consigning a number of selected animals, both male and female, to a pure bred sale to be held in conjunction with the County Fair. This is the first sale to be held in conjunction with the County Fair and some interest in it is being shown by project farmers. A heavy demand for breeding stock is noticed and the sale should prove valuable to both producer and purchaser.

A great deal of interest is being manifested in a proposed pure bred sale to be held in Belle Fourche next season. Arrangements are being made for this sale now.

Wednesday of this week a report was received that anthrax had been discovered by a local veterinarian near Vale. The State veterinarian was called and, in company with him and the local veterinarian, further investigations were made. Two other post mortem examinations were made and anthrax positively identified. A wholesale vaccination of exposed cattle was begun and before the end of the week 1,000 cattle had been vaccinated; by the end of next week it is expected four thousand or more cattle will have been vaccinated. Most of the vaccinating is being done by the farmers after demonstrations are given.

The State Veterinarian held several meetings in the course of his investigations. These meetings were largely attended. Thorough measures of prevention were explained and the necessary precautions to be taken were gone into. In addition to the discussion of anthrax, the State Veterinarian instructed the stockmen regarding the control of other contagious diseases. One of these, contagious abortion, created a good deal of interest and discussion.

The anthrax found is not of the virulent type, and, because of its destroying young cattle including all ages up to two years, has been mistaken for blackleg. Not until one project farmer had lost four head was anything but blackleg suspected. These died within two days, hence the call to the local veterinarian and the discovery of the real trouble. Most of the cattle vaccinated up to date are running on the exposed range east of the project and are owned by project farmers.

It is hardly probable that the project will suffer from the disease to a very great extent, as the outbreak is on the lower end of the project and the laterals will not disseminate the infection.

For the week ending September 14, the anthrax situation is reported well under control. The second inoculation is now being given in a large number of herds and after this next week anxiety for the present season will be over.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Belle Fourche (continued).

The State Fair at Huron and the South Dakota State College were visited during the past week.

Regular visitors at the State Fair say the show this year was not up to standard. Especially was the agricultural exhibit very much curtailed. The shortage of agricultural exhibits was due to the shortage of farm labor and the general economy wave due to war conditions.

The live stock classes held up much better than the agricultural division. However, among the exhibitors many familiar faces were conspicuously absent. In the beef cattle exhibits, the Herefords excelled the other breeds in number of individuals of exceptional merit. The Shorthorns, both single and double standard were quite limited but of fairly good quality. Perhaps one of the greatest disappointments in the live stock section was the shortage of sheep exhibits. Very few of the many breeds were exhibited and the numbers were very much limited. In the dairy classes the Holsteins overwhelmingly predominated. One feature of the show was the intensive publicity given to the food value of dairy products.

One feature of the splendid hog exhibits that created a great deal of interest was the boys' pig club division. Keen competition existed among the youngsters. Many a proud daddy discussed the exceptional merits of his boy's prize pig.

The Durocs and Poland China classes outnumbered all the other breeds combined, while, at the same time, the Duroc Jersey show outnumbered the Poland China representatives. The hog classes in all of the several breeds represented were exceptionally strong. The Chester Whites made a very imposing show. Hampshires and Berkshires made a very creditable exhibit. It was quite evident from the number of exhibitors from South Dakota in the Duroc-Jersey classes that this breed is the most popular in the state.

The extension division of the South Dakota State College had several splendid exhibits in the Agricultural building. County Agent activities, extension workers, disease control, insect control, drainage and farm sanitation being featured.

The outstanding feature of the agricultural division of the fair was the tractor and farm machinery exhibit. Demonstrations of every kind were being made continuously. One piece of machinery of recent invention that created not a little interest was a manure loader - revolving grab fork affair run by a gas engine.

Photographs of a very good farrowing house and pen were made. This one seemed to possess exceptional merit in its portable facilities, being held together by four bolts.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Belle Fourche (continued).

At the State College, photographs were taken of the Tunis sheep and the result of the cross on native varieties. The fat tail feature is quite strongly transmitted. New poultry buildings were being completed. From indications extensive poultry work will be carried on in the near future. Hog feeding experiments with self feeders containing ground oats, corn and tankage, with no pasture, were being conducted.



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WESTERN IRRIGATION AGRICULTURE.

FIELD NOTES

Yuma.

During the week ending August 31, the following temperatures were recorded: Maximum 107, minimum 73, and greatest daily range 33.

Twenty acres were irrigated.

Alfalfa hay harvest was completed this week and considerable cultivating and hoeing accomplished. The first picking of Egyptian volunteered blocks of cotton was made.

Preparation of land and the earliest plantings of fall and winter garden plants were begun.

During the week ending September 7, the maximum temperature was 105, minimum 61, and greatest daily range 42. A trace of rainfall measuring .01 inch was recorded.

Forty-nine acres were irrigated.

The greater part of the week was taken up in picking cotton and miscellaneous cultivating. Also a part of the ditch system was hoed and cleaned.

The onion seed produced in tests this season was threshed, resulting in the following yields:

White Bermuda, planted on beds.....	1,393	pounds per acre
White Bernuda, planted on the flat.....	1,754	" " "
Crystal Wax, planted on beds.....	1,277	" " "
Crystal Wax, planted on the flat .....	1,258	" " "

If such yields were produced commercially they would indeed be very profitable.

Mr. Blair was away from the station during the week on a trip to the sections growing cotton in the more northern valleys of California.

Cotton picking on the Yuma Project has started and laborers are beginning to arrive in encouraging numbers. An effort is being made by the growers of all the different varieties of cottons to cooperate in the importation of more cotton pickers and establish a general scale of prices to be paid for picking. The prices now agreed on are as follows: Pima, 4 cents per pound; Durango, 2 cents; and short staple cottons 1-1/2 cents per pound.

During the week ending September 14, the maximum temperature was 104, minimum 63, and greatest daily range 37.5.

Forty-two acres were irrigated.

A further summer pruning and restaking of varieties was completed in the deciduous orchards. Much hoeing and cultivating was accomplished and cotton picking continued. One wagon outfit was used in



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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

Yuma (continued).

hauling gravel for several days.

The earliest sorts of seedling dates have been ripening for the past week. This is the first year that the plantings on the experiment farm have produced any fruit of value. There should be many trees bearing fruit next season.

San Antonio.

During the week ending September 21, the maximum temperature was 98, minimum 53, and greatest daily range 33. The total precipitation which came as one shower on Thursday night was 1.62 inches. This rain will be of much benefit to late feed crops, gardens, and pastures and in putting the soil in condition for preparation and planting fall crops.

The principal field work was hauling manure for the rotation experiments. Sorghum and Sudan grass hay were also hauled in. Some cotton was picked. The greater part of Friday and Saturday was spent at miscellaneous work about the buildings. By Saturday afternoon, some of the land most recently plowed was sufficiently dry for harrowing, and the harrows were started.

Mr. Highfill, Inspector of orchards and nurseries for the Texas State Department of Agriculture was a visitor on Monday.

Belle Fourche.

During the week ending September 21, the maximum temperature was 87, minimum 26 and precipitation .06 inch. The first killing frost occurred on September 18, when the temperature went down to 28. All Corn was well matured before this frost. The corn on dry and irrigated rotations was cut and shocked during the week, and all the silage varieties were cut and hauled in. All the plowing of grain plats in Field A has been completed.

Four and one-half acre plats were fenced in Field O for hogging corn; one lot will have third cutting alfalfa, together with the corn; one lot corn and tankage; one lot corn and alfalfa hay; and one lot corn alone.

The corn plats to be hogged in field A were fenced and the hogs will be turned in as soon as the estimated yield can be taken.

Mr. M'Call, Horticulturist of the Extension Division, visited the station on the 21st.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

North Platte.

Practically the entire week ending August 31 was taken up with soliciting live stock for the county fair. Several men were assisted in selecting both hogs and cattle to exhibit and some suggestions were given as to fitting them to show.

Three farmers were assisted during the week in starting pit silos, and, while they will not be able to get their corn cut green and put into the silo, they will shock the corn, and, after husking out the best of it, will run the fodder through the cutter and add water to it as it goes into the silo. One of the farmers on the project was assisted in planning a dairy barn. This man is building a barn to hold twenty head of dairy cows and is planning on making his farm an exclusive hog and dairy farm, selling the butter-fat and feeding the skim milk to the hogs. He will have a pit silo at the end of the barn and run the silage into the barn on a litter carrier.

Most of the week ending September 7 was given to soliciting live stock for the county fair and in making preparation for the live stock exhibits. A number of farmers were assisted in selecting stock to exhibit at the fair.

Two of the men who were given some assistance last week in starting their pit silos were called on again this week and given a little assistance in the same work.

One half day was spent this week in weighing a bunch of 131 head of hogs on a feeding test. These hogs have been on a self-feeder of corn and running on alfalfa pasture. They are an exceptionally fine lot and a few of them will be shown at the fair.

Butter-fat is higher in price than at any time this year, both of the creameries of the valley now paying 56 cents per pound. Alfalfa hay is in demand; the lowest price being paid thus far this fall is \$15 per ton in the stack and as high as \$17 per ton has been paid.

During the week ending September 14, two farms were visited to investigate a disease which was affecting cattle. In one herd of 125 head, about ten head were found to be badly affected with sore mouth, mycotic stomatitis. These cattle are mature and if not affected with this disease would have been fat, but they were in a very poor and weak condition. Two out of the herd had already died. The owner was instructed to take the unaffected ones to a fresh pasture and to take the others up to the corral and feed them bran mash and syringe their mouths out twice daily with a strong solution of borax water. The other herd of another farm were treated in the same way. The cattle have now recovered.



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Field Notes.

North Platte (continued).

A call was received during the week to visit a farm having some sick hogs. The pigs were found to be in a very poor physical condition. The owner was feeding them on dry beet pulp with milk and beet molasses poured over it. They were about five months old and weighed about fifty pounds. The three that had died upon being posted were found to be clogged in the stomach and intestines with beet pulp and alfalfa.

The county fair was held at Mitchell on the 11, 12, and 13. Considering the shortage of labor, and other war-time conditions the fair was a success and the exhibits were good. There were 38 entries of dairy cattle, 22 entries of beef cattle, 36 entries of hogs exhibited by the men, and 20 entries of pigs by the boys in the pig club, twelve entries of sheep, and 40 entries of horses and mules. There was more interest shown by the people in general over the dairy and hog exhibits than in the other exhibits of live stock. The dairy breeds shown were Holstein, Jersey, and Guernsey. No Shorthorn cows were shown as dairy cows. During the fair a dairy cattle breeders association for the dairymen of the North Platte Valley was formed by the dairymen. There are now 15 members in the association and there will probably be more. There were two Shorthorn bulls shown with the beef cattle and the others were all Herefords.

In the hog exhibit, the Duroc-Jersey predominated, but there were some very good Poland Chinas shown. There were three Duroc-Jerseys shown which have been on a feeding test, pasturing on alfalfa with access to a self-feeder of corn and a self-feeder of shorts. These pigs took first, second, and third prizes in their classes. They were April pigs and weighed 187.9 pounds.

In the boys' pig club exhibit the Duroc-Jerseys also predominated with the Poland Chinas next, and four Hampshires. The latter did not show up as well as the former two.

During the week ending September 21

During the week ending September 21, assistance was given one of the farmers on the project in starting a pit silo. This man had a good crop of corn which was fully mature, so he cut his corn and shocked it and was then going to husk the corn and put the stocks into the silo, running a stream of water into the cutter so as to furnish moisture for the partially dried stocks.

Several farmers were visited during the week in the interest of dairying, urging the men to cut all corn so as to save it for silage or fodder, and to conserve every bit of food possible for the cattle this winter. One farmer was assisted in making a sled for cutting his corn, which, to his surprise, worked very well and



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes

North Platte (continued)

enabled him to cut his corn in less than one-fourth of the time it would have taken him to cut it by hand.

A meeting of the Creamary board at Scottsbluff was attended during the latter part of the week relative to making plans for shipping in some more dairy cattle from Wisconsin this fall. Nothing definite was done at the meeting but another meeting was called for the forepart of next week.

Butter-fat is now selling for 58 cents per pound at the Scottsbluff Creamery. Alfalfa is selling for \$20 per ton in stack.

Shoshone.

Two days of the week ending September 14 were spent with a man who runs a large band of sheep near the project. He was assisted in selling 800 head of old ewes on the project. These are the first ewes to be bought by project farmers this fall, but it is hoped that a good many more can be placed here. The man who sold the sheep was also assisted in purchasing 50 acres of beet tops and 75 tons of alfalfa hay for use in wintering some of his sheep on the project. He paid from \$6.00 to \$15.00 per acre for the beet tops and the hay was purchased for \$16.50 per ton. The man who sold the hay and part of the beet tops agreed to water and feed the sheep on his farm, all of the feed to be consumed between October 25 and March 10. Several other farmers were visited and were offered the proposition of selling the hay and feeding it on their own farms but no other deals were made. It is hoped that it may be arranged for a number of the farmers to dispose of their hay in this way.

The load of stock hogs which was sold last week was shipped this week, shipment being delayed on account of scarcity of stock cars. There is a big demand for cars here at present, as the movement of cattle and sheep from the range is very heavy.

One of the farmers this week ensiled 2 acres of sunflowers which he had sown for a test of sunflower silage. He estimated that about 35 tons of sunflower silage was secured from 2 acres. This man had been cutting sunflowers, feeding them to the cows for several days in connection with alfalfa hay and reported that the cows relished the green sunflowers very much.



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Field Notes.

Truckee-Carson.

The Nevada State Fair was held at Fallon, Nevada, during the week ending September 14. The vegetable and fruit exhibits were very satisfactory and especially fine specimens of every thing in these lines were exhibited. The live stock exhibits were very meagre. A very excellent herd of Holstein cattle, and an excellent herd of white-faced cattle, all Nevada stock, were exhibited. A herd of Berkshire hogs was also on exhibit. In addition to this, there were a few draft horses and a fair poultry exhibit. Horse racing occupied the usual amount of attention.

The fair proper seemed to be of very minor consideration. The people of the project seem to be fast losing interest in the state fair. Complaint is made that a disproportionate amount of interest is devoted to the racing features.

On Friday and Saturday of the week a meeting of all the county agents of Nevada was held at Fallon. In connection with this meeting visits were made to various points of interest in the project.

The modified type of Gurler silo at the farm of Mr. Kallenbach was practically completed at the end of the week. Arrangements have been made for building a second silo of modified Gurler type similar to the one on the farm mentioned. This silo will be built 10 feet in diameter and 16 feet high above the foundation this season and next season an extension of 10 feet will be added. There is only sufficient corn on hand to fill the 10x16 structure. Under the present methods of constructing this type of silo, an extension can easily be added the second year.

One of the farmers on the project is now building an oblong pit silo 8 feet deep, 10 feet wide, and 30 feet long. Into this pit silo he expects to place his crop of kafir corn without cutting. At feeding time, he expects to cut the ensilage down with a hay knife for feeding. This rancher claims to have had success with this method of ensiloing kaffir corn.

Bellefourche.

Stocker hogs are being bought by Omaha representatives who made their appearance on the project during the week ending September 21. Six cars left Saturday from Newell and Nisland at prices ranging from 17-1/2 to 19 cents per pound. A number of hogs are not being sold at that figure and may be sold later in cooperative shipments.

Ninety cars of grass cattle left local points for the Omaha markets during the past week.



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Field Notes.

Bellefourche (continued)

Mill men advise they can furnish ground local grown barley at \$2.05 per cwt. in ton lots. Corn is still around the \$3.35 mark and not much being bought. New corn will probably sell for \$3.00 though none has yet reached local mills.

The local creamery is paying 60 cents for butter-fat. August 31, the price paid was 47 cents, an increase of 13 cents in 21 days. Cream production is on the increase and interest is increasing in the dairy business. The local creamery is producing a few hundred pounds over the five thousand pound figure every week.

The experiment farm at Newell has put in a concrete pit silo and will fill it with sunflowers, corn and sorghum. This will be the first experiment in the use of sunflowers for silage in this State and the results are looked forward to with a great deal of interest.



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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES.

Yuma.

During the week ending September 21, the maximum temperature was 101, minimum 55, and greatest daily range 38.

Twenty-six acres were irrigated.

Routine work of cultivating, hoeing, and leveling of rough land on the "D" series demanded all time of laborers throughout the week.

Cotton picking on the Yuma project is progressing well. Labor seems to be coming in from Mexico in quantities sufficient to supply present requirements, although the cotton growers have failed to carry out their proposed cooperation in the importation of additional labor.

W. I. A. NOTES

David W. Jones, Jr., former Assistant at the Scottsbluff Experiment Farm, has been appointed Second Lieutenant, United States Army, commanding Company "E" Development Battalion, Camp Fremont, California.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Tieton.

Four calls were answered during the week ending August 24, 18 farms were visited, and 7 office conferences were held.

Seven new silos have been built on the project this season and a number of others were ordered from the Indiana Silo Company for summer delivery. The project has the best corn crop in its history and the high price of alfalfa hay will lead to the utilization of a maximum amount of silage crops.

Sixteen farms were visited during the week ending August 31 in answer to calls for assistance. Five office conferences were held, and one day was spent in the office drafting plans for a self-feeder for pigs.

There is an increased interest in the grain cost of pork produced at this time. The educational work done during the past is evidently bringing results for there is an increased number of calls in regard to grains to supplement pastures, for finishing pigs and for self-feeders. Assistance has been given in the planning and the construction of several feeders but none of these has been built entirely satisfactorily and several have required some rebuilding. It is evident that a model feeder which can be used as a demonstrator on a number of farms will be of material assistance in this work and plans are being drafted for this purpose.

The sentiment in regard to dairying is being maintained remarkably well in face of the high feed prices. Good grade cows are selling from \$85 to \$125 and a very few are moving except in cases where readjustment is advisable or where there is surplus stock for sale. One or two dairy sales have been held for the disposal for surplus aged stock in order to make room for freshening young stuff and the prices have averaged around \$80. The Tieton will lose one of its best herds due to the death of the owner. There is the usual amount of cull stuff being moved to market and a general lack of desire to increase the herds at present.

Ten calls for assistance were answered by farm visits during the week ending September 7. Twenty-three farms were visited and 8 office conferences were held.

It does not appear possible at this time to reorganize the cow testing association on a desirable basis. Several of the largest herds included in the association last year have been sold at auction or culled to considerably smaller size and a few of the old members do not care to take on the work another year. It is possible that an association could be formed by taking in new territory but the districts covered by the old association were so large as to make the operation inconvenient and unwieldy.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Tieton (continued).

The Wapato irrigation project includes lands on the Yakima Indian Reservation. The Reservation section of the project is farmed principally by whites on three and five year leases. For this reason the live stock industry has developed to a comparatively small extent—hay and grain industries are important there. Equipment for live stock raising is also inferior and the project offers a large field for demonstration work. All classes and qualities of live stock are owned on the Reservation and in sufficient numbers to form a fair foundation for the work.

During the week ending September 14, 6 farms were visited in answer to calls for assistance, and 10 office conferences were held. Two days were spent in directing and helping to build a demonstration self-feeder for pigs and in painting and completing the adjusting devices on the same. One day and a half was spent in helping to prepare a dairy, swine and sheep educational exhibit to be placed in the Yakima county building at the State Fair at Yakima, September 16 to 21.

The demonstration self-feeder was completed and moved to Mr. Fraser's farm for use in feeding a lot of pigs for the market. It is agreed that the feeder is to be left there only until Mr. Fraser is convinced of the practicability and desirability of the method and can build one of his own. Four other farmers are waiting for the feeder when Mr. Fraser has made a decision.

The third crop of alfalfa is being cut and apple picking is beginning. The outlook for labor is less satisfactory than at any time during the year. Wages averaged about \$3.50 per day and board during the first and second cuttings of alfalfa but many farmers are now paying \$4.00. The increase is chiefly due to the shortened job afforded by the third cutting and the advent of the apple season.

During the week ending September 21, 5 calls were answered by farm visits, 8 farms were visited and 4 office conferences were held. Parts of two days were spent in conducting boys' live stock judging contests at the State Fair. Considerable time was spent in answering questions and meeting men at the Yakima county exhibit in which the live stock demonstration prepared in cooperation with county Agriculturist Price and the Yakima Commercial Club was installed.

The self-feeder demonstration began last week with Mr. Fraser was so successful that Mr. Fraser built a feeder of his own this week and released the demonstration model for use at the Fair grounds. Its chief value at the fair was in attracting the attention of farmers interested in pig feeding and thus affording an opportunity for acquaintance.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Tieton (continued).

From a live stock viewpoint, the Washington State Fair is a very immaterial institution. During the four years in which this office has been established in Yakima the live stock entries have been so few in number as to afford practically no competition between herds in any of the departments. The annual sheep sale inaugurated in 1917 brings out larger numbers of sheep than the competition feature. Returns from this year's sale have not yet been announced.

There were 8 horses in the horse barn and 11 gasoline tractors were on exhibit. The latter appeared to divide the attention equally with the live stock entries. The attendance this year was much better than in any previous year and the agricultural entries were of good numbers and quality. Due largely to the almost universal use of the automobile farmers from the entire Yakima valley were in larger attendance than in former years.

Uncompahgre.

Nine farms were visited during the week ending September 14, and calls were received from 20 sources.

The greater part of the week was occupied with the arrangements for the Western Slope Fair at Montrose, Colo.

One day was spent with the County Agent of Delta county. A trip was made to view a field of sunflowers. There were 70 acres on the one farm. These were grown at 7,000 feet altitude. The yield on this farm was very heavy and it was estimated that they would get near to 25 tons per acre.

The local food administration received an order allowing the low grade of wheat to be fed to hogs in the valley. This is tending to encourage the hog raisers to continue in the industry.

There were several sales of feeder hogs made during the week at 18 cents, f.o.b. Montrose.

The entire week of September 21 was spent at the Western Slope Fair at Montrose, Colo. Twenty-five calls were received at the Fair on the matter of selection of stock. The live stock show was excelled this year in every department except horses. There were 100 head of Duroc-Jersey hogs on exhibition. Very few other breeds were represented. The showing of dairy cattle was good. Most of the exhibits were of the Holstein breed. One exhibit of Guernseys was shown this year from a new breeder. There was a small showing of sheep, most of which were Cotswolds.



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Field Notes.

Uncompahgre (continued).

Silo filling has been in progress during the week as the weather has been very threatening. No frost has yet occurred. Regardless of the labor shortage this season, the work of caring for the crops is well taken care of.

The price of butter-fat advanced during the week to 58 cents. Outside creameries are paying 60 cents.

Due to the increase in price of butter-fat there has been some call for a shipment of cows from the outside. An effort is being made to locate a carload to supply the immediate demand.

Shoshone.

During the week ending September 21 a visit was made to the Billings Fair and to the Huntley Experiment Farm. Arrangements had been made with Mr. Hansen to be at the farm on the morning of September 19 to receive visitors from the Shoshone project. This had been advertised in the Powell papers for two weeks but no visitors arrived. Several farmers had expressed an intention of visiting the farm but several of the men did not get to go to Billings and those who went did not find it convenient to arrange to visit the experiment farm.

Arrangements were made for the sale of a carload of stock hogs for \$17 per cwt. delivered to the Powell stock yards.

With two of the project farmers, a visit was made to a sheep ranch to look at the broken-mouthed ewes which were for sale. One of the men bought 177 head which were culled out at \$9.00 per head being allowed a small cut back.

Truckee-Carson.

During the week ending September 21, there were received 41 calls for assistance and 15 farms were visited. Considerable time was spent in assisting in the filling of the home-made Gurler type of silo on the farm of Mr. Kallenback and in arranging for the construction of another silo of the same type on the farm of Mr. Noble. With the completion of these two silos, there will be five silos in use on the project. If the last two silos constructed prove satisfactory there will no doubt be several constructed next year as there is much interest shown. The two silos recently constructed were built on very short notice. These parties had planned to build a silo and had planted corn for filling the same, but on account of rush work and high cost of materials for such a silo as they had contemplated, the matter of silo construction was dropped. When, however, the advantages of the home-made silos



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Field Notes

Truckee-Carson (continued).

in point of cost and time of construction were pointed out, the parties decided to go ahead with the building. The first of these modified Gurler silos built this fall has been filled about a week, and gives every indication of being satisfactory.

On Wednesday an outbreak of forage poisoning was detected among the horses at the experiment farm. One of the work mares came down with the disease with symptoms typical of the many cases that have appeared in this valley. The Veterinary Department of the University of Nevada was notified and upon their arrival the first diagnosis was confirmed and all the horses on the farm were immunized against the disease. Samples of the litter about the corrals and the various foods were taken for the purpose of determining the source of the infection.

MISCELLANEOUS.

Every dairy herd in the United States that on July 1 had been officially accredited as free from tuberculosis or that had passed successfully one test with a view to certification is listed in a publication just issued by the Bureau of Animal Industry, United States Department of Agriculture.

A copy of this list was mailed to each of the Demonstration field-men on October 4, 1918.



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WESTERN IRRIGATION AGRICULTURE.

FIELD NOTES.

Truckee-Carson.

The corn varieties were harvested and yields calculated as shown in the following table. The yields here given are subject to correction after moisture content and shelling percentages are determined.

Yield of Corn Varieties.

Rank and Variety.	Source of seed.	YIELD.		Yield, per acre, pounds.	Percent stand.
		Series 1.	Series 2.		
1. Minnesota No. 13.....		Pounds	Pounds		
1. Minnesota No. 13.....	Disco	81	95	2790	74
2. Disco 90 Day.....	do	44	52	1520	31
3. Riverview Special.....	do	43	45	1395	29
4. Wimples Yellow Dent....	Gurney	39	57	1520	36
5. Early Murdock.....	do	84	76	2535	81
6. Australian White Flint..	Portland	79	94	2820	100
7. Minnesota No. 13.....	Gurney	...	...	2185	66
8. Rainbow Flint.....	do	60	75	2140	75
9. Golden Glow.....	do	26	27	840	26
10. Disco Pride.....	Disco	67	54	1920	90
11. Northwestern Dent.....	Gurney	68	46	1810	86
12. Australian White Flint..	T.V.C.	43	64	1745	89

\* Key to source of seed....Disco - Dakota Improved Seed Co.  
 Gurney - Gurney Seed and Nursery Co.  
 Portland - Portland Seed Co.  
 T. V. C. - T.V.Conner, Fallon, Nevada.

It will be noted that Minnesota No. 13 received from the Dakota Improved Seed Company yielded much better than the same variety purchased from the Gurney Seed and Nursery Company; and the Australian White Flint received from the Portland Seed Company was better than that locally grown by T. V. Conner. These results indicate that source of seed is of at least equal importance to the selection of the varieties.

The season this year was long and all varieties were fairly well matured. It is noticeable that in short seasons the Australian White Flint is usually the best and that in the longer seasons a number of the dent varieties outyield the flint.

At a later date the moisture content and shelling percentages will be given. When the data is complete, the rank of the varieties as here given may be slightly changed.

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Field Notes.

Truckee-Carson (continued).

The average of all plats was 2.8 tons per acre. The yield was distributed among the cuttings as follows: first cutting, 43 per cent; second cutting, 29 per cent; and third cutting, 28 per cent. The yield per acre is less than in any of the preceding years, due apparently to the use of the better plats for other purposes than the growing of alfalfa.

Plat Yields of Alfalfa.

Plat	Area, acres	First Crop		Second Crop		Third crop.		Total yield, per acre	
		Actual Yield	Yield per A.	actual yield	Yield per A.	Actual yield	Yield per acre		
D 1	.28	...	...	170	605	...	...	170	605
4	.34	460	1350	400	1175	270	795	1130	3320
5	.57	650	1140	590	1035	380	670	1620	2845
8	.46	2925	6360	1125	2440	440	955	4490	9760
F 1	.25	850	3400	360	1440	400	1600	1610	6445
2	.25	790	3160	400	1600	380	1520	1570	6290
3	.25	910	3640	525	2100	490	1960	1925	7700
7	.25	475	1900	180	720	200	800	855	3420
8	.25	410	1640	190	760	320	1280	920	3680
10	.25	430	1720	...	...	195	780	625	2500
12	.25	415	1660	145	580	190	760	750	3000
13	.25	810	3240	290	1160	500	2000	1600	6400
14	.25	665	2660	675	2700	550	2200	1890	7560
15	.25	610	2440	495	1980	550	2200	1655	6620
H 5	.35	910	2600	625	1785	580	1660	2115	6045
6	.30	650	2170	690	2300	560	1865	1900	6335
7	.23	500	2180	300	1305	325	1415	1125	4900
12	.29	1115	3850	940	3240	725	2500	2780	9590
13	.29	865	2980	715	2465	515	1780	2095	7225
14	.29	1200	4145	915	3155	810	2795	2925	10095
15	.36	1235	3430	950	2640	975	2710	3160	8780
16	.43	1450	3380	1455	3430	1235	2875	4160	9685
17	.50	1200	2400	1400	2800	1060	2120	3660	7320
21	.34	1100	3240	825	2430	715	2100	2640	7770
22	.34	850	2500	700	2060	675	1985	2225	6515
23	.34	310	913	155	457	415	1220	880	2590
24	.34	565	1660	350	1030	500	1470	1415	4160
25	.29	295	1015	125	430	385	1330	805	2775
26	.29	565	1950	210	725	305	1050	1080	3725
27	.29	500	1725	125	430	340	1170	965	3330
28	.29	530	1830	175	605	330	1140	1035	3575
29	.29	190	655	75	260	180	620	445	1535



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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

San Antonio.

During the week ending September 28, the maximum temperature was 92, minimum 50, and greatest daily range 27. The total precipitation was .36 inch, coming on the 26th and 27th. This was just right to cause an even, rapid germination of oats seeded earlier in the week. Moisture conditions are satisfactory for fall crops. The nights have been rather cool but the days were usually quite warm.

Oats for pasture were seeded on D4 and the field east of the barn and on D3 for the steer pasturing experiment. All fallow lands were harrowed and orchards cultivated. Cowpeas on A5-14 and 18 were cultivated. Considerable time was spent in picking cotton on C4 and C5. Stakes were set up on the rotation plats. Borders were repaired on A4-7, 8 and 9. Johnson grass on B3 and C3 was hoed out. Rhodes grass on B3 and B4 was cut and raked up. Some of the trees on A1 and B3 were sprayed for San Jose scale under the direction of Mr. Highfill, inspector of orchards and nurseries for the Texas State Department of Agriculture. A little time was spent at odd jobs about the buildings.

MISCELLANEOUS.

The following memorandum was issued by the Acting Chief of Bureau under date of October 7:

"The large number of applications for leave while traveling has led to the question of either curtailing or absolutely abrogating this privilege during the period of the war. After full consideration it has been decided to allow leave only after the most careful scrutiny of each application and when disapproved would result in serious hardship or injustice to the traveler.

"To this end it is desired that, in addition to the formal statement now submitted, every application for leave while traveling be accompanied by a memorandum from the Head of Office, stating explicitly how refusal of leave would work a hardship upon the applicant."

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the first time in the history of the world that the  
whole of Europe has been compelled to submit to  
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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

Belle Fourche.

Heavy rains prevented much travel over the project during the week ending September 28.

Much of the third cutting alfalfa has been badly damaged by frequent rains. Grain in the shock is sprouting.

One Rambouillet buck from the Denver sale was brought to Belle Fourche and resold upon arrival to Mr. M. J. Smiley for \$400.00.

Mr. Frank Cock, Rambouillet breeder on the project, is arranging to fit a number of bucks for the Salt Lake and Denver ram sales for 1919.

A large number of project farmers running sheep on the range are of the opinion that the cross-bred bucks on the native ewes produce the best range sheep for this section. Contrasting with the opinion of these, are other breeders of range sheep who prefer to use the cross-bred ewes with a pure bred buck of either fine or long wool variety.

Tieton.

For calls for assistance were answered during the week ending September 28, 26 farms were visited and 6 office conferences were held. Two days were spent in traveling over parts of the Sunnyside and Wapato projects with Reclamation Service officials in becoming acquainted with the topography of the districts, community divisions and farmers.

Mr. Hallowell imported an excellent Berkshire boar to the Tieton this week from Clark Brothers herd at Prosser on the Sunnyside project.

The Yakima Potato Growers' Association at a Saturday night meeting decided to ask \$40 per ton for U. S. No. 1 Netted Gem potatoes and \$35 for other grades. District meetings are being held to acquaint all growers with grades, markets and association plans and to attempt to include more growers in the association.

The alfalfa purchased by Pacific Coast dairymen from Yakima growers is moving to the buyers in a satisfactory manner. Very few complaints have been received in regard to quality and grading and most of these have been found to be based only upon a few bales whose surface had discolored from ground moisture after baling.

The Seattle butter-fat price is now quoted at 66 cents. On this basis, fat in cream delivered in Yakima brings 64 cents and the price on the farms is 62 cents. Local milk buyers are paying an 11 cent premium for butter-fat in whole milk, making the price 73 cents. The Pacific Coast condensary price is quoted at \$3.10 per cwt.



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Field Notes.

Shoshone.

During the week ending September 28, 5 farmers were taken to see some ewes and lambs which had been reported for sale and had been investigated. Three of the men divided between them 377 broken-mouthed ewes for which they paid \$9.50 per head. These ewes were high grade Delaine and were in excellent flesh. The other two farmers bought in partnership 224 small lambs for \$8.00 per head, with the expectation of feeding them on alfalfa for a couple of months.

A car for stock hogs, which was ordered 9 days ago, and a car for cattle which was ordered 11 days ago, have not yet been received but they are expected the first of next week. This delay in getting cars makes the handling of stock hogs very difficult because farmers do not like to list their hogs for sale without knowing the price they are to receive and the buyers do not like to make a price until the hogs are practically ready for delivery.

North Platte.

The forepart of the week ending September 28 was spent in the interest of the dairy industry. On Tuesday the Board of Directors of the Scottsbluff Creamery Company held a meeting, which was attended by some of the farmers, wherethe plan of getting in some more dairy cows was discussed. The Board voted to send a representative to Wisconsin with the Agriculturist to get three carloads of Holstein cows and two-year old heifers. They also voted to include two registered Holstein bulls in the shipment, which would be ready for service, and to sell these and the cows to the farmers in the valley at cost in Wisconsin, plus the freight to Scottsbluff. Plans were made to leave for Wisconsin October 13.

The creamery company here and the farmers cooperate very well together in working for the interests of dairying and everyone concerned thinks it more satisfactory for the creamery to get the cattle and the farmers to buy them from the creamery company than it is for the farmers to send for them independently. A shipment of this kind was made by this company last spring which was very satisfactory to everyone concerned.

On Saturday of this week a meeting of the North Platte valley Dairy Cattle Breeders' Association was held at the Scottsbluff Creamery. This is a new organization which was recently formed during the County Fair. About 15 members were present. By-laws and constitutions were adopted and a board of directors was elected. An advertising committee was also elected to promote the interests of dairying in the valley. Plans were made for a consignment sale to be held later in the fall of some of the surplus Jersey cattle.



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Field Notes.

North Platte (continued).

One farm was visited during the week to see some cattle which were reported to be very sick. They were found to be in bad condition due to overfeeding green corn fodder in too large amounts, after having had only alfalfa hay. All of the cattle recovered without any special treatment excepting a good big dose of salts.

Assistance was given one farmers this week in selecting a Jersey bull.



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FIELD NOTES.

Huntley.

During the week ending October 5, the maximum temperature was 75, minimum, 36; precipitation, a trace.

The harvesting of sugar beets was begun on October 1, which is about two weeks later than usual, due to the small acreage grown and to the fact that the maturing of the beets was retarded by an invasion of the beet web-worm which occurred during August.

Weather conditions have been very favorable for starting winter wheat and the earlier planted fields are up in good shape. Killing frosts have not yet occurred and corn and other late crops are well matured.

The filling of the two silos was completed during the week. One of these silos was filled with corn and the other with sunflowers. The sunflowers were grown in field A-V (orchard) and were the Mammoth Black Russian variety. A test of different widths of row and of spacing in the row was conducted with this crop. There were three widths of row--20, 30, and 40 inches. In each width of row the plants were thinned, respectively, 6 and 12 inches apart, and a plat in each was also included in which the plants were not thinned. The seeding of the sunflowers was done on May 21 with a corn planter. All plats were irrigated uniformly three times during the season. The crop averaged, when harvested, from 11 to 12 feet in height. The plants were in full bloom and about fifty per cent. of the seed pods well formed and the seed beginning to harden. Harvesting was done by hand with corn knives. The highest yield, which was at the rate of 37.6 tons per acre, was secured from the 20-inch rows not thinned, and the lowest, which was at the rate of 24.32 tons per acre, from the 40-inch rows thinned to 12 inches. Apparently the best quality of silage came from the 20-inch rows, where the plants were smaller and the stalks not woody, as was the case in the wider rows. The average yield for the field of 2.15 acres was at the rate of 31.7 tons per acre. The yields are given in detail in the following table:

Plat No.	Width of Row	Thinned	Yield	
			Per plat, lbs.	Per acre, tons
A-V-1	20 inches	12 inches	19,178	32.20
2	20 "	6 "	17,219	33.38
3	20 "	Not thinned	18,910	37.62
4	30 "	12 inches	14,565	31.80
5	30 "	6 "	14,138	31.70
6	30 "	Not thinned	17,105	32.85
7	40 "	12 inches	12,825	28.46
8	40 "	Not thinned	6,765	31.02
9	40 "	6 inches	5,765	26.68
10	40 "	12 "	10,400	24.52



FIELD NOTES.

San Antonio.

During the week ending October 5, the maximum temperature was 90 and the minimum 50, and the greatest daily range 38.

A second picking of cotton on the rotation plats was made and soil samples taken. The remainder of the Acala cotton on the Slocum field was picked. Several loads of manure were hauled and applied to the rotation plats. Weeds were mowed on B-4 12 and 13 and B5-8.



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Field Notes.

Belle Fourche.

During the week ending October 5 a few flocks of sheep were returned to project farms from the summer range. Most of the flocks will not be brought in for several weeks as grass is still plentiful and the sheep are doing well.

Range men are holding their sheep and will continue to run them on grass until bad weather, unless there is a decided change in market conditions.

Freight cars are very scarce and, in some instances, orders have been placed six weeks before delivery. At local points, all cars that will be available up to November 19 have been contracted for.

A large number of breeding stock have been brought in, mostly bucks, although a few ewes were among several lots. Hampshires, Shropshires, Rambouilletts and Corriedales make up the varieties. The latter are now represented by about sixty pure-bred and twenty half-bred bucks. The Shropshires were purchased for local farm sheep husbandry; the others for range purposes.

Anthrax appeared in a herd of one hundred and fifty hogs on a farm near Newell. Four hogs, averaging around two hundred pounds, were lost before a diagnosis was established. A demonstration in vaccination was made. The anthrax outbreak on the lower end of the project has been controlled.

Some intestinal necrosis among pigs has been reported.

Six farm visits were made during the week.

During the week ending October 12, seventeen farm visits were made. Two farmers were assisted in the selection of pure-bred herds of swine.

One day was spent with Dr. A. M. Taylor, of the Tuberculosis Eradication Division of the Bureau of Animal Industry. Five farm visits were made to breeders of pure-bred live stock on the project. Four farmers are very much interested in the accredited herd registry and in a few weeks several herds will be tested.

Baled alfalfa hay is leaving the project at a sale price of \$20 per ton, f.o.b. cars at local stations. The hay being sold is of the best second and third cuttings.

Twenty-three double-deck cars of sheep left the local stations for Omaha on Friday. A large number of project sheepmen are bringing their sheep in from the summer range. Very few purchases of lambs for feeding purposes are being made on the project. The car situation is causing much uneasiness. Sheepmen are obliged to ship regardless of the market because of the impossibility of obtaining cars when desired. All available cars are now contracted for up to November 26.



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Field Notes.

North Platte.

During the week ending October 5, Mr. Unruh made a visit to the Shoshone and Huntley projects. The trip over the Shoshone project was made with Mr. Magruder and various phases of the live stock work on the project were discussed and a conference was held with officials of the Reclamation Project.

The principal live stock industry noted on the Shoshone project was the raising of stock hogs, and most of the farmers have some stock hogs for sale. The market for this class of hogs was good and the prices being received were about one dollar per hundredweight higher than the prices received on the North Platte for the same class of stock.

The dairy industry on the Shoshone did not seem to be in very healthy condition, no whole milk being taken by the local creamery and the price of butter-fat being low as compared with Nebraska prices. Some of the dairy farmers have registered bulls and good high grade cows.

On the Huntley project, hogs and dairying are both very important. The Huntley Experiment Farm has a well equipped dairy barn and some excellent Holstein cattle. There is also a large herd of Duroc-Jersey hogs there, and a small band of Shropshire sheep. Two large silos have been built in connection with the dairy barn. One of these is filled with corn and the other with sunflowers. Mr. Hansen says the people there are becoming very much interested in the live stock combination of hogs and dairy cattle, and that a few farmers near the experiment farm have put up silos during the past year and bought some very good cows. Several large herds of Holstein cattle and Duroc-Jersey hogs were seen on farms on the project.

During the week ending October 12, seventeen farms were visited on the North Platte project regarding general live stock problems.

Mr. Unruh had planned to leave this week with a representative of the local creamery for Wisconsin to assist in the location and selection of three carloads of Holstein cattle, which the creamery proposed to sell to the project farmers at cost, but this trip has been postponed because of the influenza epidemic. As a ban has been placed on all public gatherings and sales, the Creamery Board thought it best not to bring the cattle in at this time. They will be brought in just as soon as conditions warrant.

As yet there has been no heavy frost on the project and some of the corn is still in good condition to be put into the silo. This is a great help to the men who built their silos this year and were late getting them completed.

All the farmers in the valley are very busy with their beet hauling and potato digging. Most of the potato cellars are filled now and a good many tons are siloed on the farms. The sugar factories have been running for two weeks.



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Field Notes

Truckee-Carson.

During the week ending October 5, there were received forty calls for assistance and eight farm visits were made.

The two home-made plastered silos recently completed and filled have been attracting considerable attention and have stimulated considerable interest. It was predicted that the silos would not stand up when filled because of their light construction. This comment was so common that the owners themselves became skeptical. Time has proven that the structures are equal to the task and the silos show every evidence of giving satisfaction. One of the silos was filled with corn, with the exception of the last three feet at the top which was left after settling. This space was filled with Russian thistles. On top of this was put a layer of straw. The corn which was put into this silo was a little dry, and to make up for needed moisture a stream of water was run into the cutting machine and elevated into the silo with the silage. This method moistens the silage very uniformly.

The other silo was filled with corn and sweet clover. The results obtained from the sweet clover silage will be watched with great interest.

Arrangements have been made for a cooperative shipment of hogs to begin the first week in November. It is expected that two carloads will be ready by that time. The cooperative shipping of hogs offers the only opportunity for marketing hogs locally in any considerable numbers. There are quite a number of hogs on feed at the present time. The local price for barley is \$42.00 and for tankage is \$70.00. With these prices for feed, and 18-1/2 cents for prime hogs in San Francisco, there is considerable inducement in hog feeding.

The alfalfa hay market situation in the valley has changed considerably in the past month. In the middle of the summer \$20 per ton was being offered for alfalfa hay in the stack. Considerable hay was sold at this figure but a great many ranchers felt that much higher prices would be offered and refused to sell. From that time until now the price of alfalfa hay has steadily declined until there now seems to be very light demand for hay and prices of \$14 to \$15 per ton in the stack are in prospect. Recent rains throughout California have had a depressing effect on alfalfa prices locally, and a few dairymen, expecting unusual prices for hay, disposed of their dairy cows and some sold their hay. The price of hay now and the present price of 71-1/2 cents for butter-fat, places the dairy business on a very different basis. There seems to be no tendency now toward the disposal of good dairy cows, but rather a tendency to secure better cows. Dairy cows of good quality have commanded good prices throughout the summer in spite of the disposition on the part of some to sell.

Shoshone.

Mr. Unruh, of the North Platte project, spent a portion of the week ending October 5 on this project investigating methods used in the demonstration work.



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Field Notes.

Shoshone (continued)

Two cooperative shipments were made--one a car load of 30 head of cattle, 14 men cooperating, and the other two cars of stock hogs, 16 men cooperating. Seventeen dollars per hundredweight was received for the hogs, delivered to the Powell stock yards.

There has been a very unusual amount of rain this week. This rain has damaged a great deal of alfalfa hay which is in the stack and has greatly delayed the harvesting of potatoes.

Uncompahgre.

Thirteen farms were visited during the week ending September 28, and calls for assistance were received from 18 sources.

A call was received from one farmer to investigate a hog sickness. There had been four hogs lost and several more were sick. The trouble seemed to be from poisoning. The alkali weed found in abundance on a seedy pasture seemed to cause the sickness.

The greater part of the week was taken up with office work and in looking into the hog shipping association organization at Olathe. The first shipment is practically all listed. The hogs will be sent to Denver market.

The picking of apples is well under way and it is thought that they will soon be harvested. The weather conditions are ideal for the harvest work.

Several orders were received the latter part of the week for dairy cows and an attempt was made to locate a desirable source.

During the week ending October 5, thirteen farms were visited and fourteen calls for service and information received.

A meeting was called at Olathe, in cooperation with the county agent, regarding the plans for the second annual corn show. Committees were appointed to attend to the detail work of the show, which will be held December 6 and 7.

The first shipment of hogs was sent out by the Olathe shipping association during the week. They were sent to the Denver market. The manager received 10 cents per hundredweight and does all the work connected with the shipment.

Several farmers were assisted during the week in silo filling. One batch of sunflowers was put up too green and spoiled. They were too watery. This field had been planted too late, so that the sunflowers did not mature properly.

The farmers and the stockmen are disputing over the price of hay. Stockmen do not want to pay more than \$13 per ton, while farmers are holding it for \$15 and higher. The prevailing price at present seems to be \$15, although not much has changed hands.

Potatoes are bringing \$1.35 per cwt. at the close of the week. The market is rather slow on account of green potatoes. Apples are moving quite rapidly and the greater part of the crop is picked.

Butter-fat is down to 56 cents, being 62 cents the first part of the week.



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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES.

Yuma.

During the week ending September 28, the maximum temperature was 100, minimum 52, and greatest daily range 41.

Eighteen acres were irrigated.

All plats of alfalfa hay on the station were harvested during the week. The usual amount of hoeing and cultivating was also accomplished and some further grading was done on rough land on the "D" series.

The various test wells for recording the fluctuations of elevation of the ground water were all pulled and redriven with renovated points.

Messrs. Blair and Bailey spent Friday at the experiment station Indio, California.

During the week ending October 5 the maximum temperature was 102, minimum 58 and greatest daily range 44. A precipitation of .42 inch was recorded on October 5.

Thirty-nine acres were irrigated.

Alfalfa from the roads surrounding the farm fields and some of the miscellaneous legumes on D10 were harvested. Leveling was continued on D27 to 37 and manure was hauled to garden plat A12-2.

The greater part of available labor was employed at cotton picking on fields D13, 14, 15 and 22.

During the week ending October 12, the maximum temperature was 97, minimum 55 and greatest daily range 42.

Seven and one-half acres were irrigated.

Cotton picking and leveling of land employed most of the force throughout the week. Some fall pruning of pecans and ornamental trees was finished.

Over the Yuma project there is beginning to be felt quite a shortage of labor in picking cotton, which has not been seriously felt up to this time.

All the saw gins on the project are now in operation, while the roller gin plant at Winterhaven will begin operation the following week.

Messrs. O. F. Cook, G. N. Collins, and F. W. Herbert, of the Cotton Breeding Office, and Mr. H. N. Vinall of the Forage Crop Office, spent several days of this week at the experiment Farm.

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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

San Antonio.

During the week ending October 12, the maximum temperature was 95, minimum 64, and greatest daily range 29. The total precipitation was .77 inch, which occurred as one shower on Friday morning. This rain will be of much benefit to fall gardens, pastures and fall crops in general.

The principal field work was disked plowed rotation plats to kill volunteer oats and weeds, and to disk in manure which was recently applied. Some manure was hauled for the rotation plats. A small amount of cotton was picked. Cowpeas in the corn and cowpea experiment on field C6 were harvested. Heads from the second growth in the sorghum variety test on field C6 were cut. Wet weather prevented field work the last part of the week.

Belle Fourche.

During the week ending October 19, the maximum temperature was 84, minimum 34, precipitation T.

The harvesting of sugar beets and potatoes was completed during the week. Corn husking was commenced on the dry land rotations and nearly completed. The corn was well matured before frost, and some 40 bushels of Paynes White Dent seed corn have been saved.

The weather for the month of October has been very favorable and all the work has been well finished up to date.

Truckee-Carson.

For the two weeks ending October 12, Mr. Headley reports as follows:

Tomato Variety Test

Twelve varieties of tomatoes were planted in the greenhouse March 5. About May 25 they were transplanted to the field in rows containing 25 plants. Ten rows of Perfection, four rows of John Baer and two rows of each of the other varieties were planted, each row containing 25 plants. Tomatoes were picked as fast as they ripened and weighed. The yields are calculated to yield per plant of those which reached maturity.

The experimental error is so great that difference in yield between varieties of less than 3.5 pounds per plant should not be considered significant.

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WESTERN IRRIGATION AGRICULTURE  
Field Notes.

Truckee-Carson (continued).

Tomato Variety Test (continued).

Rank and Variety.	Series 1.		Series 2.		Date first ripe.
	Yield, pounds	Yield, per plant, pounds	Yield, pounds	Yield per plant, pounds	
1. Earliana.....	276	13.8	369	18.5	July 30
2. Bonny Best.....	273	13.0	376	17.9	July 27
3. Earlibell.....	340	16.2	280	13.4	Aug. 1
4. Prolific.....	320	15.3	237	13.2	July 27
5. John Baer.....	274	11.4	240	14.1	
do do .....	220	11.0	303	13.2	July 27
6. Stone.....	239	12.6	228	12.0	Aug. 9
8. Coreless.....	168	7.3	367	15.3	Aug. 27
9. Globe.....	187	7.5	289	13.2	July 30
10. Early Minnesota.....	269	11.7	172	7.8	Aug. 6
11. Dwarf Champion.....	230	10.0	228	9.5	Aug. 6
12. Favorite.....	158	7.9	202	10.0	Aug. 6

Effect of Time of Planting Upon Potato Yields.

Seven rows of potatoes were planted at weekly intervals, and stand and yield noted as shown in the following table. Row No. 1 is an outside row and should be disregarded:

Row No.	Date planted.	Percent stand	Yield, pounds
1.....	April 17	86	396
2.....	April 17	84	326
3.....	April 23	96	429
4.....	April 30	93	298
5.....	May 7	99	338
6.....	May 14	87	260
7.....	May 21	89	244

The greatest yield was obtained from the row planted April 23, and the smallest from the row last planted. In 1917 the highest yield was obtained from the row planted May 3. It is evident that the late plantings are the least profitable.

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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

Truckee-Carson, continued.

Experiments with Eelworm Infested Seed Potatoes.

Potatoes, heavily infested with eelworm, were purchased locally in the spring, and treated at various temperatures, and for varying lengths of time before planting, as reported for the week ending May 11. These were harvested October 9 and 10. The per cent stands and yields are reported below:

Row No.	Plat 1.	Yield 120 Ft. row.	Average yield of adjoining check plats.	Deviation of test plats from check plats.	Stand..		Average stand of adjoining check plats	Deviation from adjoining checks.
					Plants	Per- cent		
1	Check.....	40			58	68		
2	Untreated Eel- worm.....	32	45	-13	43	51	71	-20
3	Check.....	50			62	73		
4	30° 24 hours..	64	44	+20	56	66	67	-1
5	Check.....	38			51	60		
6	35° -12 hours.	43	50	-7	56	66	67	-1
7	Check.....	61			62	73		
8	35° -24 hours.	58	54	+4	63	74	66	+8
9	Check.....	47			50	59		
10	35° -48 hours	36	36	0	53	62	64	-2
11	Check.....	24			59	69		
12	40°- 6 hours..	33	25	+8	55	65	67	-2
13	Check.....	25			46	54		
	<u>Plat 2.</u>							
1	Check.....	78			75	77		
2	Untreated Eel- worm.....	61	92	-31	58	68	76	-8
3	Check.....	105			63	74		
4	40°- 12 hours	72	121	-49	70	82	77	+5
5	Check.....	137			60	79		
6	40°- 24 hours	100	135	-35	63	74	82	-8
7	Check.....	133			71	84		
8	40°- 36 hours	78	156	-78	65	77	82	-5
9	Check.....	179			68	80		
10	45° - 9 hours	113	183	-20	58	68	78	-10
11	Check.....	86			64	75		
12	45° -12 hours.	24	?		53	62		

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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

Truckee-Carson (Continued).

Experiments with Eelworm Infested Seed Potatoes (continued).

The plats on which the potatoes were grown, were greatly lacking in uniformity of soil so that the experimental error is rather large. There is no indication that any of the treatments given affected the stand. Apparently the higher temperature treatments of plat 2 caused a reduction in yield, although the figures are not very consistent. In studying the table it should be noted that the eelworm seed is not so productive, even when not treated, as that used in the check rows. Eelworm counts will be made during the winter and reported at a later date.

Whole Vs Cut Potatoes for Seed.

The yields shown in the table below indicate that whole seed is more productive than cut seed. This is in accordance with previous experiments. Whole seed planted 14 inches apart in the row did not yield better than whole seed at 18 inches. The experimental error in this table is rather large. A difference in yield of less than 35 pounds between test rows should not be considered significant:

	Distance apart in row, inches	Average weight seed, pieces	Per- cent stand	Yield lbs.	Average yield adjoining checkplats	Deviation of test plats from check plats.
1. Check.....	18		100	70		
2. Whole.....	18	2.9	100	148	101	+ 37
3. Check.....	18		100	133		
4. Halved .....	18	1.3	100	111	126	- 15
5. Check.....	18		93	120		
6. Whole.....	18	2.5	100	190	140	+ 50
7. Check.....	18		100	159		
8. Halved.....	18	1.25	100	90	153	- 63
9. Check.....	18		98	148		
10. Whole.....	14	2.5	95	191	142	- 49

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

Minidoka.

For the week ending September 21, Mr. Rinehart reports:

The first of the four cooperative bands of sheep arrived home during the month. Because of the dry summer they were brought home three weeks early. As all of the water holes on the desert are dry they were shipped in. As the weather was dry and cold in the Forest all summer losses by straying were exceptionally heavy. In this first band of 2,000, the loss amounted to 12-1/2 per cent, however, a number will yet be secured from other bands hence accurate figures cannot yet be given. The sheep did well this summer, better than last and arrived home in good condition.

The Minidoka County Fair was taken over and managed by the Farm Bureau. The fair was entirely agricultural with much attention given to demonstrations of types and breeds of live stock and classes and varieties of farm products. Contrary to expectations the interest, even of the town people, was found to be good. A display of the best specimens of live stock and an explanation of the types and breeds proved to be both entertaining and instructive. The fair was planned and held in accordance with the suggestions of the Department of Agriculture. The attendance was good and the interest such that it will be of much value to the agricultural industry.

The Third Annual Ram Sale of the National Wool Growers' Association was attended during the week ending August 31. Compared with the two former sales the general average of the sheep was higher in quality and was shown in better condition. Bidding was more rational and more careful selection was used than in the past.

Five hundred and twenty-nine rams, 40 cross-bred rams and 101 registered ewes were purchased by Idaho sheepmen.

Of the breeds of sheep, the Rambouilletts were most in demand. Hampshires sold well but not in proportion to the real value as judged by past standards. The demand for the Longwools was only moderate.

The following shows a condensed summary of the numbers and prices of the different breeds:

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Field Notes.

Minidoka (continued).

BREED.	NUMBER			Top for breed.	PRICE		
	Rams	Ewes	Total		Average.	Stud Rams	Range Rams
Rambouillet.....	1507	441	1948	\$6200	\$391	\$ 113	\$ .75
Hampshires.....	529	212	741	1700	294	55	70
Cotswolds.....	404	10	414	400	188	50	70
Lincolns.....	170	39	209	375	197	44	84
Oxfords.....	60	...	60	47	...	46	...
Shropshires.....	37	...	37	175	158	33	...
Delaines.....	85	...	85	75	62	68	...
Corriedales.....	18	...	18	525	337	212	...
Panamas.....	85	...	85	...	...	53	...
Crossbreds.....	188	...	188	...	...	75	...

Yakima.

Eight calls were answered during the week ending October 5, six in regard to blackleg and two to plans for live stock. Nine office conferences were held and twelve farms were visited.

Six herds, containing 67 cattle, were vaccinated against blackleg, this activity being due to some losses during the week previous. Fall vaccinations are usually made after the herd comes off the range but the deaths occurred among cattle on farm pastures.

Three farms were visited, one or all of which may be used as demonstration farms in 1919. The Tyson farm at present has only Holstein cattle but it is planned to add Duroc-Jersey swine this fall. The Barkes farm of 30 acres is being planned for a combination of cows and pigs in connection with the 10 acres of orchard and 20 acres of plow land. The DeSellem farm is chiefly susceptible of development as a swine proposition.

Twelve calls were answered during the week ending October 19, 24 farms were visited. One day was spent in visiting farms in the White Swan district of the Wapato project.

Sugar beet harvesting is beginning in the valley, the price for beets being \$10 per ton. An effort has been made to limit the shipment of dried pulp from the valley so that enough will remain to supply local demands. In 1917 pulp was both exported and imported in the valley. The company has announced a \$12 per ton price for 1919.

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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Yakima (continued).

The swine market is especially good at Yakima at present, top quotation being \$18.50. Few pigs are moving at this time.

The dairy market in cows is firmer than in the spring of this year and is growing better. Good grade Holsteins are selling at around \$100 with a good demand. Poor stuff is in abundance without much call. The local creameries are paying 68 cents per pound for butter-fat in cream delivered and 66 cents on the route. Whole milk prices average 77 cents per pound butter-fat.

Six calls were answered during the week ending October 21, 16 farms were visited and 4 office conferences were held. A seed corn selecting demonstration was arranged with Mr. Bowman, principal of the Tieton school, and Mr. Hegnauer, Extension Specialist, nine boys of the corn club attending.

Three days were spent in visiting districts on the Sunnyside and Wapato projects to become acquainted with community and district divisions and farmers therein. It is desired to select future cooperators carefully in regard to location, community standing and progressiveness.

Uncompahgre.

Sixteen farms were visited during the week ending October 12 and calls were received from 10 sources. Assistance was given the county agent in the matter of Achievement Day at the schools. One of the rural schools was visited each afternoon of four days of the week and the children taken to various farms where club work had been carried on, where short talks were given on the work carried on by various members of the party.

Potato movement has slackened somewhat during the week due to the slump in price. There are still a large number to be dug.

Some hay was sold at prices ranging from \$12 to \$15 per ton. The tendency among the farmers is to hold for more money. The cattlemen do not feel that they can pay more than \$15 for hay. There has been a large movement of sheep and cattle to market during the last month.

Truckee-Carson.

During the week ending October 12, 35 calls for assistance were received and 15 visits were made to farms in response to calls.

Some time was devoted the first part of the week to dipping sheep for sheep scab.

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Field Notes.

Truckee-Carson (continued).

This work was done in cooperation with the state sheep commission. The state sheep inspector was unable to supervise the work and asked this office to take charge. Eight hundred sheep were treated. The second treatment will take place on the 25th. There is very little sheep scab among the farm flocks. It is only when range sheep are brought into the project and sold among farmers that outbreaks of sheep scab are experienced.

Silo construction was discussed with Mr. Jones, a prominent dairyman on the project, with the result that a home-made silo with a capacity of 150 tons will no doubt be erected the coming summer. The Gurler type of silo will no doubt be constructed.

The third crop of alfalfa is being harvested and the yield is a little above the average for the second crop. There seems to be ample labor for harvest work. The demand for alfalfa hay at the present seems to be light, with almost no hay changing hands at the present time. Range cattle are coming into the project in large numbers for winter feeding. The dairy situation has improved considerably in the last 30 days. There seems to be little tendency to sell good dairy animals and a great many are showing a disposition to add dairy stock to their herds.

Shoshone.

During the week ending October 12, 4 days' vacation was taken and the time was spent in assisting with the potato harvest. Rains have depayed the potato harvest considerably this year and a big rush is on now to harvest the potatoes before a serious freeze arrives.

The car which was ordered for a shipment of stock hogs last week has not yet arrived. Some time was given to arranging for the shipment of a car of cattle sometime in the near future.

Belle Fourche.

Sixteen farm visits were made during the week ending October 19. One farmer was assisted in the purchase of 700 sheep. Two hundred of this number were lambs, 350 were two and three year old ewes and the remainder broken-mouthed ewes. The entire lot were purchased at 11-1/2 cents per pound.

Several farmers who shipped lambs during the week encountered a very bad market. Prices received for heavy lambs were below the quoted price of the Omaha markets. Lambs weighing 78 pounds on the market sold for 11 cents. The quoted market price for the day was

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Field Notes.

Belle Fourche (continued).

11-3/4 cents to 15 cents. It is difficult to understand why lambs off the farms on the project with extra weight should sell for 11 cents or why the market quotation should record the lowest selling price at 11-3/4 cents when in fact it was 11 cents. This procedure is very discouraging to farmers entering sheep husbandry, especially so after the extra efforts of the government to increase the sheep production on the farms.

The car situation is still very critical and no relief is in sight.

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WESTERN IRRIGATION AGRICULTURE  
Field Notes.

Huntley.

During the week ending October 19, the temperature was 81, minimum 38 and precipitation .09 inch.

The harvesting of alfalfa, and potatoes in the irrigated rotation experiments was completed.

The yields are given in the following tables:

Alfalfa yields, fields K and L-IV, Huntley Experiment Farm, 1918.

Rot. No.	Plat No.	Pounds per plat				Tons per acre.				Age, years.
		First	Second	Third	Total	First	Second	Third	Total	
67-D	K-II-1	630	436	...	1066	1.26	.87	...	2.13	1
-E	-2	1144	610	455	2209	2.28	1.22	.90	4.40	2
-F	-3									3
		Hogged								
61-D	K-III-1	620	596	...	1216	1.24	1.19	...	2.43	1
-E	-2	1200	760	574	2534	2.40	1.52	1.14	5.06	2
-F	-3	1488	945	684	3117	2.97	1.89	1.36	6.22	3
60-D	-7	650	426	...	1076	1.30	.85	...	2.15	1
-E	-8	1132	720	.620	2472	2.26	1.44	1.24	4.94	2
-F	-9	1244	780	532	2556	2.44	1.56	1.06	5.06	3
40-A	K-IV-3	480	530	...	1010	.96	1.06	....	2.02	1
-B	-4	1118	710	656	2484	2.23	1.43	1.30	4.96	2
42-A	-9	670	524	...	1194	1.34	1.04	....	2.38	1
-B	-10	1110	860	590	2560	2.22	1.72	1.18	5.12	2
44-A	-13	346	430	472	1248	.69	.86	.94	2.49	1
-B	-14	1090	620	750	2460	2.18	1.24	1.50	4.92	2
8-A	-22	1054	870	515	2439	2.10	1.74	1.03	4.87	7
46-D	L-IV-10	1488	1040	700	3228	2.97	2.08	1.40	6.45	2
-C	-11	596	620	485	1701	1.19	1.24	.96	3.39	1
8a-A	-14	1510	1050	710	3270	3.02	2.10	1.42	6.54	3
64-F	-15	1298	1000	690	2988	2.59	2.00	1.38	5.97	2
-E	-16	598	600	450	1648	1.19	1.20	.90	3.29	1
64-A	-20	1530	1060	730	3320	3.06	2.02	1.46	6.54	3
69-F	-22	1494	920	680	3094	2.98	1.84	1.36	6.18	2
69-E	-23	610	700	435	1745	1.22	1.40	.87	3.49	1
69-A	-27									3
		Hogged								

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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

Huntley (continued).

Yield of potatoes, irrigated rotation experiments,  
Huntley Experiment Farm, 1918.

Rotation No.	Plat No.	YIELD		Percent marketable tubers
		Per plat, pounds	Per acre bushels,	
4 C.C.	K-Iv-21	3480	232.0	86
20	K-V-5	5855	390.3	96
21	-13	4790	319.5	95
24	-9	4730	315.2	94
25	K-IV-6	7790	519.3	96
26	K-V-11	4555	303.6	95
27	-20	2305	159.6	82
30	K-IV-15	4295	286.4	96
31	K-III-13	4870	324.5	97
40	K-IV-1	6680	443.7	96
44	K-IV-II	5600	373.3	95
60	K-III-10	5180	343.7	97
61	- 4	7105	474.7	97
4-A.C.C.	L-Iv-9	6650	443.3	92
34	-3	6380	425.3	95
35	-7	6720	448.0	95
64	-19	6675	445.0	94

San Antonio.

During the week ending October 19, the maximum temperature was 85, minimum 53, and greatest daily range 32. The total precipitation was .03 inch. Cool, cloudy weather prevailed throughout the week, which increased the effectiveness of the shower which came the latter part of the preceding week.

All fallow rotation plats and other fallow fields were harrowed. Orchards were cultivated. Sorghum on field C6 was cut and raked. Cowpeas in the corn-and-cowpeas experiment on field C6 were hauled in. Farm roads were weeded and some weeding was done in the orchards. Dead wood was pruned from the trees in orchard E4 and the brush was hauled out. Cotton produced on the farm this season was ginned on Saturday and yielded two bales.

Mr. F. F. Collins and Mr. Rollins, assistant county agent, were visitors on Friday.

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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Shoshone.

During the week ending October 19, 118 head of white-faced calves were inoculated for Mr. Mucklow who purchased these calves off the range for \$35 per head. This price seems high for calves on the present market but they are well bred and well grown, about 60 per cent of them being heifers. It seems very difficult to buy stock off the range near here for less than the market price plus the freight, as the range men seem to be decidedly inclined to ship rather than take much less than these prices.

Mr. Mucklow expects to winter the calves on stubble with some alfalfa and put them on the range next summer.

Three of the project farmers went to the Forest Reserve range this week to assist the herder for the Shoshone Live Stock Association in bringing in the association's herd. This is a little late to bring the herd off the range but it seemed impossible to arrange to move it earlier because the farmers were so busy that they could not get away to assist.

Several inquiries were made this week regarding the feeding of potatoes. Only the No. 1 and No. 2 potatoes are being shipped this year so a good many culls are left in the hands of the farmers. An article was written in the local papers discussing the feeding of potatoes to hogs and cattle.

Returns were received on the cooperative shipment of cattle which was made recently. Cows sold for \$6.00 to \$8.00 per cwt. in Omaha; a two-year-old bull for \$7.50 and some yearlings at \$5.00 per cwt. The expense of shipping was 75 cents per cwt., not counting the shrinkage.

It is still very difficult to get cars, no word having been received from a car which was ordered for hogs two weeks ago.

North Platte.

During the week ending October 19, the principal work was with dairying and dairy cattle. Two farmers were started in keeping milk records and one farmer was given some assistance in making some changes in his dairy barn. A very good dairy bull was exchanged through the office this week between two farmers on the project.

One case of suspected hog cholera was reported this week but the hogs were found to be sick from being over-fed on sugar beets. One farmer was assisted in selecting two dairy cows.

Owing to the low prices received by the farmers for their hogs which have been shipped recently, there is a general tendency for the farmers now to ship their hogs without finishing them, and several of the men are now talking of selling their grain and hogs too.

There is not as much demand for any kind of live stock at the

2 November, 1918.

DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

North Platte (continued).

present time as there has been all fall, and there is very little buying of cattle and sheep for the feed-lots just now.

The week ending October 26 was taken up largely with dairy work, but there was some general live stock work done also. A conference was held with the Scottsbluff Creamery board in regard to shipping in the cows from Wisconsin but because of the ban being placed on all public gatherings the board decided to postpone this shipment indefinitely.

Several farmers were called on who wanted to buy Holstein cattle and arrangements were made with these men to have Mr. Propps, the dairy specialist at Lincoln and who is now in Wisconsin, select these cattle and send one of the farmers to Wisconsin to come home with the cattle. Mr. Whitcomb, a farmer who wanted to buy some of these Holsteins, left on Saturday for Wisconsin and will come back with a car-load and care for them in transit.

Uncompahgre.

Seven farmers were visited during the week ending October 19, and calls were received from 14 sources.

A herd of cows that were offered for sale were investigated with the idea of locating some good cows for local farmers. The herd consists of 50 head of Holstein cows and heifers of fair quality. Prices asked for the best one was \$125 per head, which was not considered out of reason.

Assistance was given in the location of a Duros-Jersey boar for a project farmer interested.

There are many sheep for sale among the local bands. The prices of good ewes are very much lower than last year and very few are changing hands. It is possible to purchase good ewes at \$12 to \$15 per head.

A few more cattle are being shipped to market owing to the high prices asked for hay.

Eleven farms were visited and calls received from 14 sources during the week ending October 26.

On Monday a trip was made with two project farmers to look at a large band of ewes for sale. These ewes were of Rambouillet breeding and large size. They were offered for \$17.50 per head. Assistance was given in the selection of 100 old ewes from a band of 300 head. Only good-mouthed ewes were taken. They will be fed on silage during the winter.

The agriculturist for the D. & R. G. R. was a visitor on the project during the week. One day was given in assisting him in

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Uncompahgre (continued).

getting in touch with the local conditions.

One day was given to assisting farmers in the location of cull potatoes for hog feed. The culls are rather short this year and in most cases where there are any the grower has hogs and will feed them himself.

One of the farmers is constructing a pit for storing of beet tops. This is the first work of this kind done on the project.

Belle Fourche.

Sixteen farm visits were made during the week ending October 26.

Several requests for assistance in location of lambs and breeding ewes were received during the week. A large percentage of the sheep are being brought to the project for wintering. It will be a week or two before all are in.

A survey of the depredation being done by predatory animals in the sheep herds shows approximately a ten per cent loss. Many farmers report even a greater loss. Most of the damage is among lambs. One farmer lost seven in one night. The matter has been taken up with the Predatory Animal Inspector of the Department of Agriculture and relief is expected. Many range men have made the statement recently that if the coyote is not destroyed they will be obliged to abandon the range next year.

Several cars of baled hay left the project during the week at a figure of \$20 per ton.

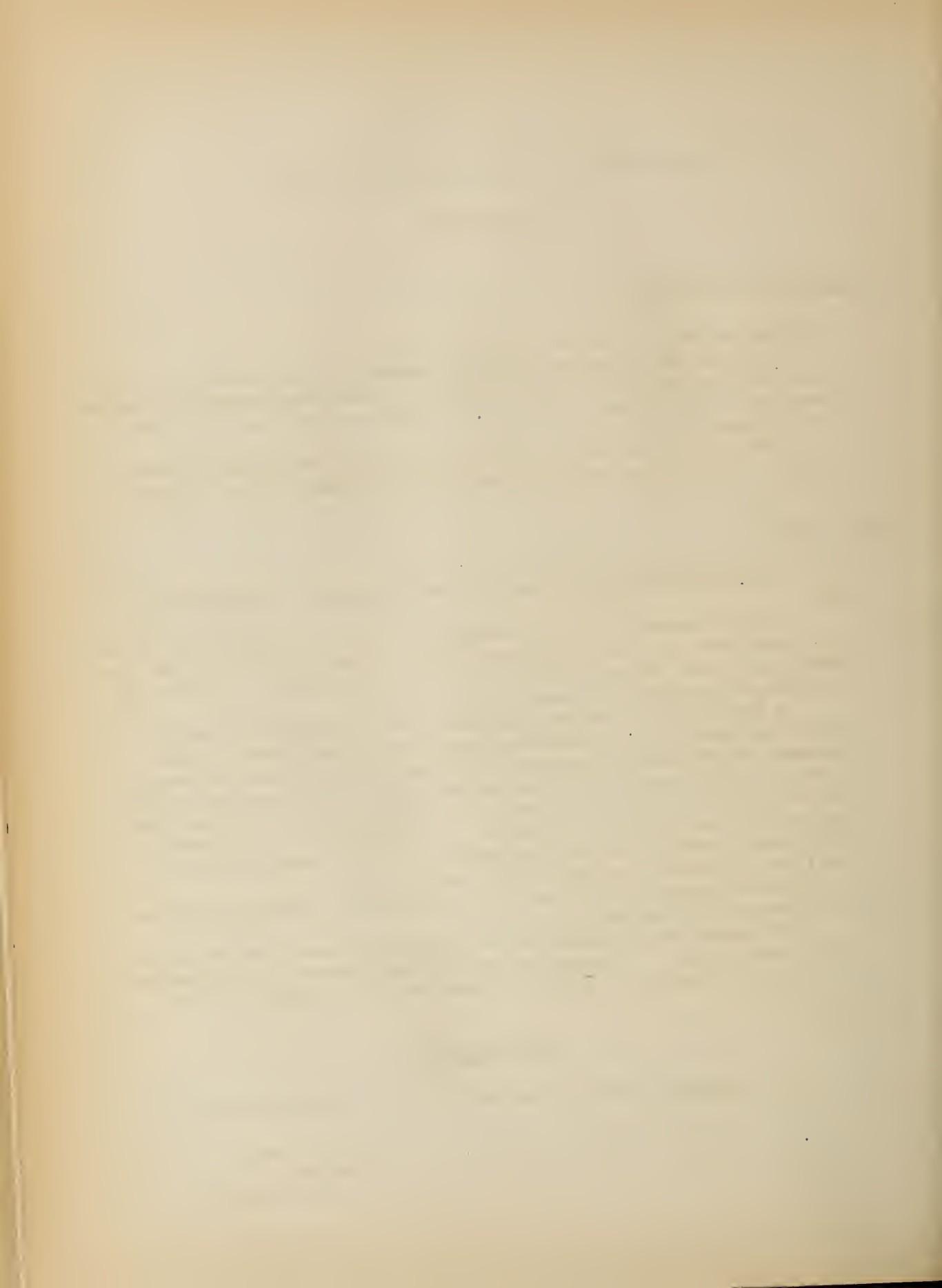
The slump in the sheep market caused many sheep men to hold back their stock. A number of project farmers are feeding lambs.

Local creamery is paying 56 cents for butter-fat.

MISCELLANEOUS

The following farm reports for 1917 have been published:

- W. I. A. Circular 21,..... San Antonio  
" " 22,..... Huntley.  
" " 23,..... Truckee-Carson.



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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES.

Yuma.

During the week ending October 19, the following temperatures were recorded: maximum 100, minimum 43, and greatest daily range 42. Eight acres were irrigated.

Most of the labor was employed throughout the week picking cotton. Several of the regular laborers have been absent this week on account of sickness.

The fig orchard, C8 to 17, was plowed and leveled. Also, considerable miscellaneous cultivation was accomplished.

Mr. F. E. Devine, of the Bureau of Markets, spent a short time at the station making plans for classing the Pima cotton which will be handled at the Winterhaven gin.

During the week ending October 26, the maximum temperature was 57, minimum 46 and greatest daily range 41. A precipitation of .08 inch occurred on October 20.

Nineteen acres were irrigated.

The leveling of new land on the "D" series and cotton picking were continued throughout the week. A general cleaning out of seed houses and an inventory of seeds on hand was made.

During the week Mr. E. B. Brown, of the Office of Corn Investigations, and Mr. H. L. Westover, of the Office of Forage Crop Investigations, returned to the station to remain for several months.

San Antonio.

During the week ending October 26, the maximum temperature was 86, minimum 56, and greatest daily range 22. The total precipitation, which came on Tuesday, Wednesday and Saturday, was 2.86 inches.

On account of wet weather, very little field work was possible. One day's plowing was done on field C6. The remainder of the week was spent in miscellaneous work about the buildings, such as threshing cowpeas and beans, greenhouse work, and in repairing buildings and equipment. Between showers, some diagrams were made showing root rot infection on the rotation plats.

Truckee-Carson.

During the week ending October 26, Mr. Headley reports as follows:

Mangels in Rotation.

Mangels in plat D followed alfalfa, and in plats E7 and 8 they are alternated with wheat. Plat E6 was manured for wheat in 1917 and plat

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WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

Truckee-Carson (continued).

E5 was not manured. The yields obtained were as follows:

Plat.	Pounds	Area	Yield, per acre.
D6.....	4830	.54	8950
E5.....	10250	.57	18000
E6.....	11795	.54	21850

POTATO VARIETIES.

Eleven varieties or strains of potatoes were grown in field A2, having a sandy loam soil previously used for the production of garden crops. The varieties were not duplicated and there were no check rows so results, taken alone are of little value, but they may be used in connection with previous experiments and in comparison with the variety test at Fernley, the results of which are not yet determined.

The varieties are arranged below in the order of yield. Marketable potatoes only are included.

Variety.	Row length	Yield	Yield per 100 ft. row
1. Gold Bond.....	318	592	186
2. Producer.....	192	313	163
3. Burbank.....	615	947	154
4. Russet Burbank.....	282	374	133
5. Irish Cobbler.....	219	291	133
6. Scotch Rose.....	417	443	106
7. Earliest of All.....	258	272	105
8. American Wonder.....	245	251	102
9. American Wonder.....	123	116	94
10. American Wonder.....	180	163	91

CORN VARIETY TEST.

In a previous report the actual yield of ear-corn of the varieties in this test was given. In the following report these yields are corrected for shelling percentages and per cent moisture. The position of the varieties in regard to rank has been slightly changed from that of the previous report.

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WESTERN IRRIGATION AGRICULTURE  
Field Notes.

Truckee-Carson (continued).

An average of the actual yield and of yield based on a perfect stand is given in the last column. These figures probably indicate the true yield of the variety better than actual yield. It is unfortunate that the stand was so variable.

Rank and Variety.	Yield		Percent mois- ture	Shelled percent	Yield dry on cob, pounds	Yield shelled, pounds.
	Series 2 pounds	Series 1 pounds				
1. Riverview Sp.,..	43	45	36	82	56	46
2. Wimples Yel.Dent	39	57	29	78	68	53
3. Minnesota No.13	81	95	38	79	106	84
4. Disco 90-Day....	44	52	38	73	60	44
5. Australian W.Fl.	79	94	33	76	116	88
6. Minnesota No.13 (9 rows, 547 Lbs)			33	78	366	285
7. Early Murdock....	84	76	38	77	99	76
8. Disco Pride.....	67	54	25	84	91	76
9. Rainbow Flint....	60	75	41	75	80	60
10. Missouri Dent....	68	46	33	80	76	61
11. Golden Glow.....	26	27	37	78	33	26
12. Australian W.Fl.	43	64	33	76	72	55

Rank and Variety	Area, acre	Actual yield shelled, pounds	Per- cent stand, pounds	Yield, based on Perfect stand pounds	Average Actual yield and perfect stand, pounds
1. Riverview Special..	.0632	728	29	2510	1619
2. Wimples Yel. Dent..	.0632	839	36	2330	1585
3. Minnesota No. 13...	.0632	1330	74	1800	1565
4. Disco 90-Day.....	.0632	697	31	2250	1474
5. Australian Wn.Flnt	.0613	1435	100	1435	1435
6. Minnesota No. 13...	.2505	1139	66	1730	1435
7. Early Murdock.....	.0632	1202	81	1485	1344
8. Disco Pride.....	.0632	1202	90	1335	1296
9. Rainbow Flint.....	.0632	950	75	1265	1108
10. Missouri Dent.....	.0632	965	86	1120	1043
11. Golden Glow.....	.0632	411	26	1,520	995
12. Australian W.Flnt	.0613	898	89	1010	954

9 November, 1918.

WESTERN IRRIGATION AGRICULTURE.  
Field Notes.

Truckee-Carson (continued).

POTATO VARIETY TEST.

Eleven varieties of potatoes were planted in single rows on the farm of E. S. Funk. A duplicate planting was not made but a row of Russet Burbanks was planted as a check every third row.

The British Queen and Pride of Multnomah made a good showing, although they were the latest of the varieties. The high rank of the Prize Taker may be due to the low yield of the check row. It did not appear to be a very desirable variety on account of a tendency to produce second growth. The smoothest potatoes were snow, Scotch Rose and Colorado Pearl.

British Queen and Pride of Multnomah continued growing until killed by frost. All the other varieties matured earlier.

All the varieties were heavily infested with eel-worm which must have been present in the soil at planting time, as the seed was not infected. The field was previously in alfalfa and had never been in potatoes. This is in accord with observations, indicating that alfalfa fields are often infested with eel-worms.

The yields given in the following table are for the 330 feet rows:

	Actual yield	Probable yield of check variety.	Increase or decrease from check	Percent increase or decrease from check
		Pounds	Pounds	Pounds
Check.....	195	...	...	...
Prizetaker.....	332	209	+ 123	159
Prizetaker.....	300	224	+ 76	134
Check.....	238	...	...	...
Snow.....	363	320	+ 43	114
Multnomah.....	475	401	+ 74	119
Check.....	483	...	...	...
American Wonder.....	500	447	+ 53	112
American Wonder Oval.....	300	410	- 110	73
Check.....	374	...	...	...
Scotch Rose .....	411	384	+ 27	107
Colorado Pearl.....	383	393	- 10	98
Check.....	403	...	...	...
Russett.....	311	412	- 101	75
British Queen.....	526	421	+ 105	125
Check.....	430	...	...	...
Earliest of All.....	362	379	- 17	96
Check.....	328	...	...	...

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

Minidoka.

During the week ending October 12, four registered Hampshire ewe lambs were selected from the flock of Mr. F. O. Rosenberger, of Rupert, and sent to the University of Idaho. All were outstanding specimens of the modern Hampshire type and will be used as part of the University flock.

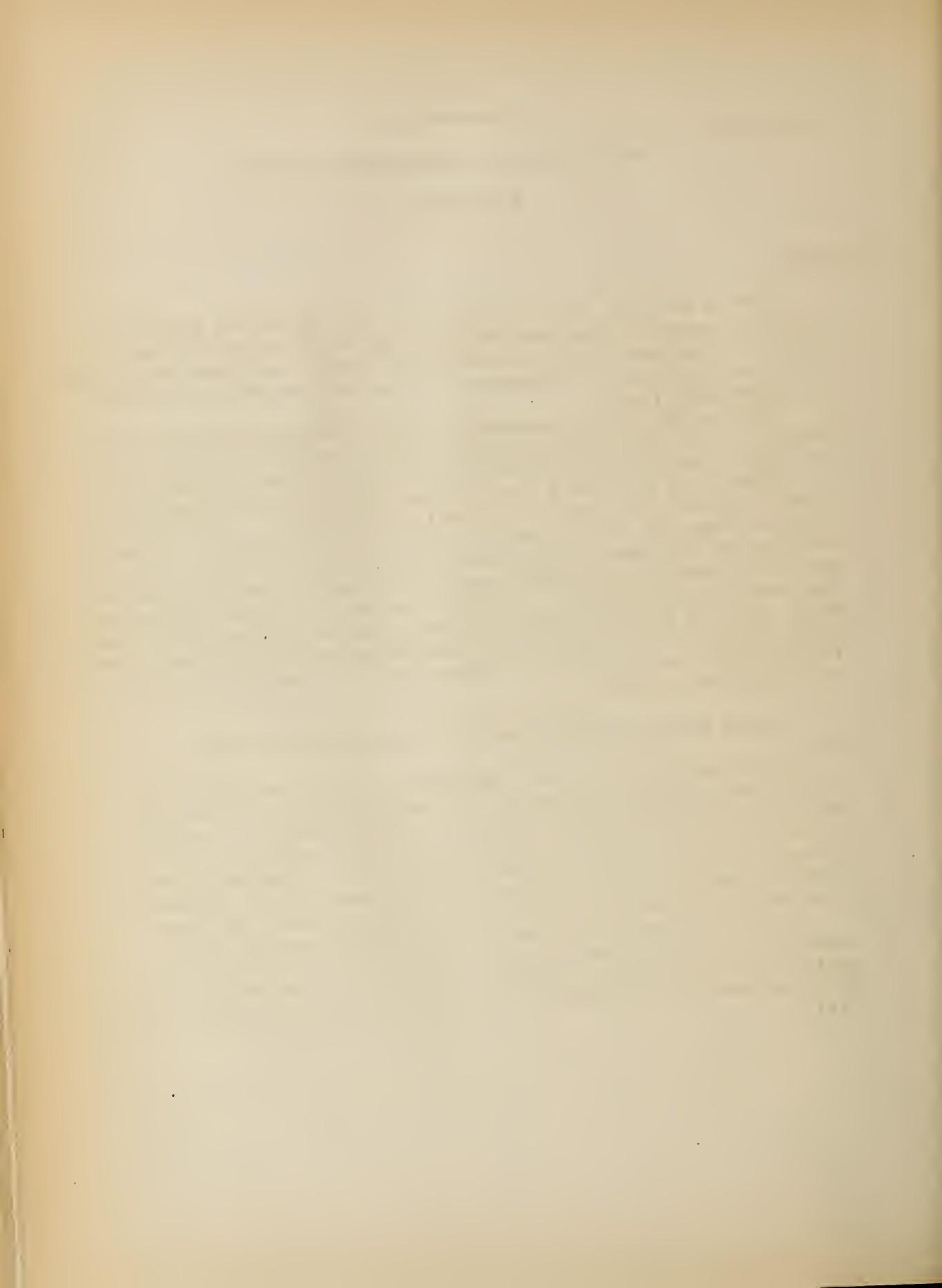
This is the second purchase of stock from the Project by the State, as the Aberdeen Experiment Station recently purchased eight ewe lambs from Mr. Rosenberger's flock of registered Hampshires.

Throughout southern Idaho the good Hampshire and Rambouillet stock, both ewes and rams, are practically all sold. The Hampshire lambs purchased by the University during the week were from a lot reserved by the owner and were not for sale to anyone else. All pure bred Lincoln and Cotswold rams have been sold but there are yet some ewes on the market. The supply has not been equal to the demand, as calls for registered stock are still being received. However, these men are so late with their decisions that they will have to wait until next year (as is recommended) or pick up a few head from different sources.

During the week ending October 19, four men were siloing beet tops.

Field demonstrations will be carried on with two carloads of steers, one of which will be fed 35 pounds of hay daily, the other fed 17 pounds of hay and 30 pounds of beet top silage. In this way it is hoped to arrive at a fairly accurate conclusion of the value of beet top silage as compared with hay. Accurate records of weights will be kept. Other demonstrations will be carried on to determine the value of syrup added to a hay ration for steers.

Where the pits for the beet top silage are near the sugar factory it is planned to cover the silage with beet pulp to the depth of 12 or 18 inches, the pulp in turn to be covered with straw. It is believed that this method will be preferable to covering with dirt.



16 November, 1918.

## WESTERN IRRIGATION AGRICULTURE.

FIELD NOTES.

San Antonio.

During the week ending November 3, the maximum temperature was 77, minimum 39 and greatest daily range 34. Weather favorable for field work prevailed throughout the week.

All fallow rotation plats and other fallow fields were harrowed. Orchards were cultivated. The final picking of cotton was made in the rotation experiments. Cotton stalks were plowed out on plats A4-13, 17 and 19 and A5-9, 13 and 17. These plats were then double-disked and harrowed in preparation for seeding oats. Sorghum hay was hauled in from field C6. Charting of root-rot infection on the rotation plats and on fields Ab8 and C5 was completed.

During the week ending November 9, the maximum temperature was 83, minimum 56, and greatest daily range 27. The precipitation amounted to .55 inch coming on the 6th, 7th and 9th, with a trace on the 8th and 10th. The weather was moderately warm but generally cloudy and damp and was excellent growing weather for fall pastures.

Little field work was done owing to rainy weather and to the fact that most of the laborers were absent on account of influenza. Oats, field peas and rye were seeded on rotation plats the latter part of the week. Some cultivating was done on the grounds and nursery, cotton on A1 was picked and plats B6-8 and 10 were disked and harrowed to get in shape for planting field peas. The rest of the time was spent at odd jobs around the buildings.

16 November, 1918.

DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Truckee-Carson.

During the week ending October 26, there were received 18 calls for assistance and visits were made to 14 farms.

On Tuesday, supervision was given the second dipping of sheep for Mr. Labet.

Further arrangements were made for the cooperative shipment of hogs.

A cooperative experiment was started on the farm of Mr. Kallenbach to test the advantage of feeding silage as a supplement to alfalfa hay, as compared with the practice of feeding a straight alfalfa ration to dairy cattle. The first Babcock testing on the herd was done this week.

There has been considerable loss reported due to black leg since the third cutting of alfalfa has been harvested and cattle turned onto the stubble fields. A systematic effort will be made to have susceptible animals vaccinated this fall. The Live Stock Disease Control Board of the state has been very prompt in answering all calls for vaccination in this valley. The animals on the Swingle bench were vaccinated by them this week. No animals was lost from blackleg on the Swingle bench until last year, when several were lost quite suddenly. The infection was thought to have been brought on the land by means of irrigation water from the Truckee river, which flows through infected territory before reaching the project.

Belle Fourche.

One farmer called at the office during the week ending November 9 and asked that 20 pure bred Corriedale bucks be found for spring delivery, the price to range from \$165 to \$200 per head. The demand for these dual-purpose sheep is increasing rapidly and the number utilized in this vicinity will be regulated largely by the number that can be bought.

Baled alfalfa is still bringing around \$20 and is leaving the project in carload lots. Cars of produce left local stations during the week ending November 2 to the number of 250. This number included cattle, sheep, wheat, beets and hay. The greater number of cattle and sheep originated on the ranges off the irrigated land. Over 1,500,000 pounds of wool were marketed at Newell and Bellefourche this year. A large part of this was grown by project farmers.

Snoshone.

During the week ending October 26, arrangements were made for shipping a carload of stock hogs. This car had been sold for \$17.50 per cwt. but because of the decline in the price of hogs and the delay in

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Shoshone (continued).

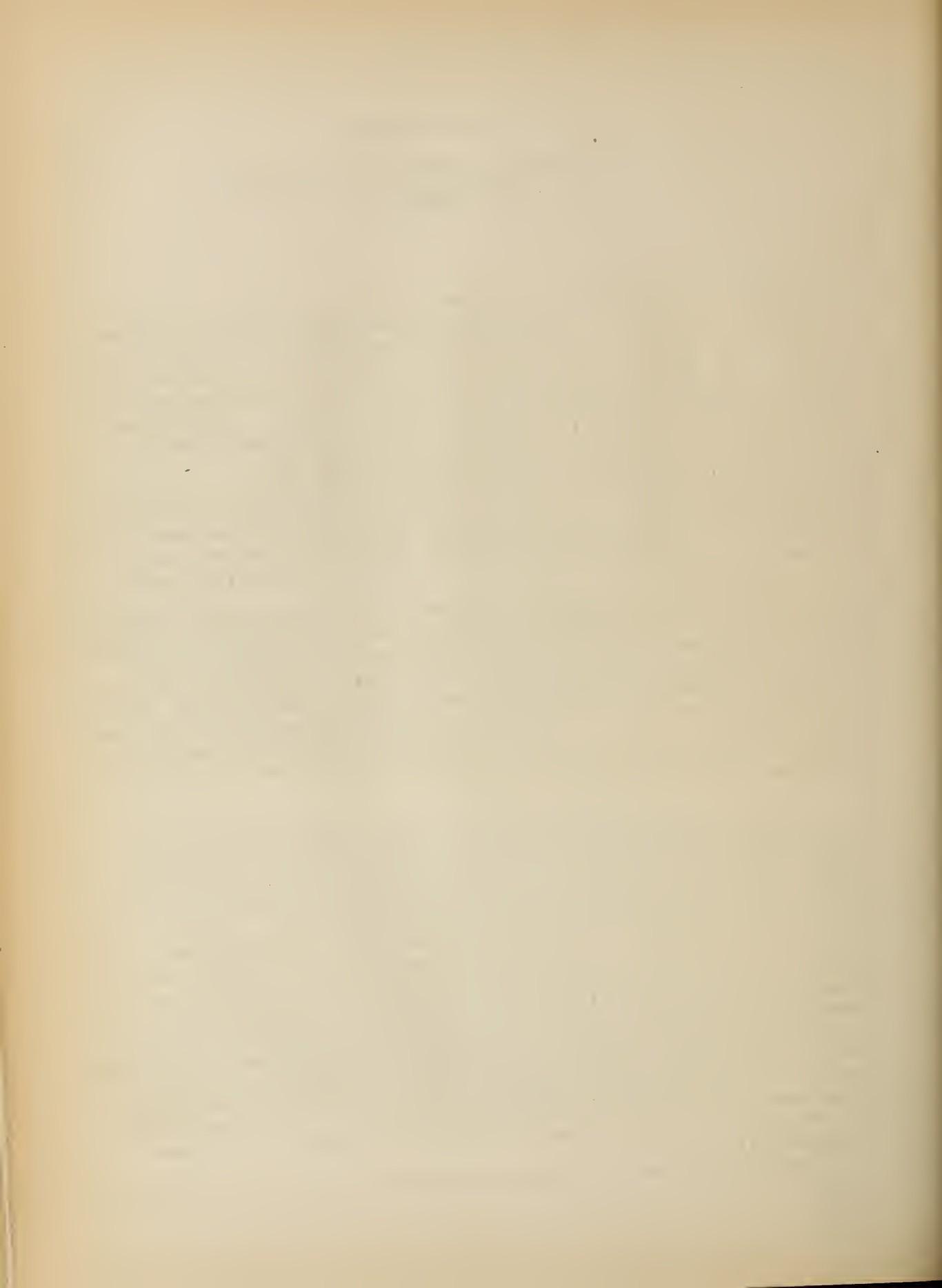
obtaining a car the buyer cancelled the order. Shortly after the order was cancelled, a notice was received that a car would be provided the next day. Arrangements were made with the freight agent to hold the car for a day to give an opportunity for disposing of the hogs. Two dealers refused to bid because of the uncertain market. Another dealer bid for \$14 and another \$15 per cwt. Enough farmers were willing to let their hogs go at that price to make a carload, so the car was sold to be loaded Monday of next week.

Arrangements were made for distributing the cattle which were sent to the Forest Reserve and are expected to be returned about the middle of next week. Delay in return of these cattle was due to the difficulty in getting help in bringing the cattle from the range. It has been storming in the mountains and it is feared there may be some difficulty.

The Agent who is handling potatoes for the local potato growers' association has been very successful in getting cars and it seems now that practically all the potatoes which were raised on the project this year will be moved this fall. An effort is being made now to arrange for storing potatoes next year. If storage could be provided at the track for a few cars, potatoes could be hauled from the farm and put in storage on days when weather would permit during the winter, then the potatoes could be loaded at the storage on track whenever cars could be obtained.

During the week ending November 2, the project herd of cattle was returned from the Forest Reserve. The cattle were in satisfactory condition, though they were badly gaunted because of the hard trip. Owing to the difficulty in getting help, the herd was brought out late and the storms made the trip very difficult. When the cattle were distributed among the farmers it was found that more than 60 head were missing. The herder thinks, however, that most of the missing ones strayed on the way down and that he can deliver them later. It is probable that he will do his best to deliver them, because he not only loses the herding fee on those which he does not deliver, but a large number of the cattle were insured and if they are not returned he will lose one-third of their assessed valuation, provided his loss does not amount to more than 2-1/2 per cent of the total assessed value of all the cattle insured. It is feared that unless the loss is fairly low, no herd will be sent to the Forest Reserve next year.

Arrangements were made for a cooperative shipment of cattle next week.



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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES.

Yuma.

During the week ending November 2, the maximum temperature was 94, minimum 36, and greatest daily range 49.

Twelve acres were irrigated.

Fields C37 to 41 were plowed and prepared for grain planting. Velvet bean varieties from fields C25 and 26 were harvested for hay yields. Cotton picking was continued.

A portion of the seedling fig orchard, C10 to 17, was seeded to alfalfa to be handled as a meadow rather than by clean culture.

During the week ending November 9, the maximum temperature was 92, minimum 29.5, and greatest daily range 47.

Nine acres were irrigated.

The minimum temperature of 29.5, occurring on the night of November 6, was the first killing frost of the season and is about two weeks earlier than normal. Frosts occurred three nights in succession which were sufficiently severe to stop the growth of nearly all cotton. There are a few favored locations, however, where the cotton was not killed. Nearly all grain sorghums, sweet potato plantings, etc. were killed.

Cotton picking continued at the experiment farm. Grain sorghums were harvested from fields A8 and E5 to 8. Plat Al4-1 was plowed and other small plats prepared for fall plantings.

The latest summer legumes from field D10 were harvested and threshed.

Huntley.

During the week ending November 9, the maximum temperature was 57, minimum -5, and precipitation .8 inch.

The harvesting of sugar beets and other field work was stopped by a snow-fall of about 9 inches, which occurred on November 4. Beet harvesting was nearing completion, and fall plowing and other field work is well advanced.

Good yields of potatoes are reported on the project although the acreage is small. The price offered at digging time was about \$1.00 per cwt., loose. Alfalfa hay is selling at \$20 per ton baled, and a few cars have been loaded at this price.

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WESTERN IRRIGATION AGRICULTURE  
Field Notes.

MISCELLANEOUS

Memorandum No. 257, dated November 13, 1918, issued by the Secretary of Agriculture, reads as follows:

"The United States Railroad Administration having decided that, effective December 1, 1918, the additional charge for passage in sleeping and parlor cars will be represented by the sleeping or parlor car ticket issued for the space occupied, the following procedure, effective on and after that date, will govern the use of transportation requests by employees of the Department of Agriculture:

1. Requests for railroad tickets must be drawn on the railroad company as heretofore, but must not include the additional passage charge. Such requests will be honored only for tickets at coach fares.
2. Requests for sleeping or parlor car accommodations will be assumed to include the additional passage charge for travel in sleeping or parlor cars.

"The foregoing instructions, when effective, will supersede the instructions contained in Memorandum No. 241, dated June 8, 1918, relative to the use of the transportation requests. It will be noted that under the new instructions it will not be necessary for the traveler to insert on transportation requests any of the special phrases referred to in numbered subsections 1, 2 and 3 of Memorandum No. 241.

"In view of the facts that rates between certain points vary over different lines of travel and that this will effect the amount of the additional railroad fare covered by the requests issued to the sleeping or parlor car company, it is of vital importance, for accounting purposes, that the traveler, in preparing a transportation request for sleeping or parlor car accommodations, fill in, after the word "via" on both the transportation request and the coupon (notice of issue of ticket), the initials of the railroad line or lines over which the travel is to be performed."

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

Uncompahgre.

The greater part of the week ending November 2 was spent in the office on account of the close quarantine in the county due to the epidemic of influenza. Three office conferences were held besides conferences on the street with four other farmers.

Seven farms were visited in connection with a call for assistance in locating dairy cows. Miscellaneous calls were received from eight sources.

The epidemic in both Montrose and Delta counties is quite severe and a close quarantine is in effect.

One trip was made with the County Agent of Montrose County to assist in adjusting a threshing controversy in one section of the county.

The greater part of the week ending November 9 was spent in the office. Calls were received from 22 sources and three farms were visited.

Four new members were admitted into the Bull Association. There are 20 members in the first block.

A movement was started to make up a shipment of odds and ends of cattle sometime ago. During the week 44 animals were received. These will be shipped soon to Denver. Two carloads will probably be shipped. This plan is meeting with favor among the ranchmen as it enables them to dispose of animals that otherwise would be unable to find a market.

Snow fell during the week and the temperature dropped to 17 degrees above.

A conference was held with County Agent Divilbiss relative to holding an extension school at Delta sometime in December.

Yakima.

Eight calls for assistance were answered during the week ending November 9, 17 farms were visited, and 11 office conferences were held. One herd of five calves were vaccinated following the loss of two from blackleg.

The Seattle butter-fat price had dropped to 68 cents, thus causing a two cent drop in local prices, i.e., 64 cents per pound for butter-fat in cream and 75 cents in milk. The Puget Sound Condensary price for milk is now \$3.50 per cwt. Seattle quotes Washington triplet cheese at 36 and 37 cents per pound to the factories. Local buyers are offering \$16.50 per cwt for prime pigs. Weanling pigs are selling at \$5 each and sows with pig are bringing \$35 and up.

The sugar beet harvest is now well under way and several growers report a yield of about 16 tons per acre. The price is \$10 per ton

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DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Yakima (continued).

for this seasons crop. Very little corn is moving as yet but the initial price for ear-corn is \$40 per ton. Some California barley is moving into Washington at \$53 per ton bulk, in carload lots. The Wapata Unit farmers are selling some barley to local dealers at \$52 and \$53 per ton, sacked. The hay market is weakening somewhat due to lack of cars - some hay moving at \$22 and \$23 per ton, baled and delivered on cars.

Truckee-Carson.

The week ending November 9 was taken up very largely in connection with blackleg work and infectious anemia in horses. Two of the men from the State Disease Control Board have been working on the project during the past week. During the week 48 calls for assistance were received and 23 visits were made to farms. Two hundred head of young dairy cattle have been vaccinated against blackleg. Several blackleg diagnoses have been made.

An epidemic has broken out among the horses on several farms on the project. The disease has been diagnosed by the State Disease Control Board as infectious anemia. The disease is quite fatal and is causing considerable anxiety. The symptoms are first some loss of appetite and a general lowering of vitality. These symptoms gradually increase in severity, though there may be times when the animal appears to recover for a short while. The temperature gradually increases to four or five degrees of fever and usually remains at this point. In the later stages of the disease the animal appears quite weak and exhausted and edematous swelling may appear about the nose, breast, belly or on the legs. So far in this valley no cases have recovered, though at present several animals are undergoing a course of treatment prescribed by the Disease Control Board.

Shoshone.

During the week ending November 9, 7 farm visits were made, 21 office conferences and 15 other conferences were held. An article was written for the local paper on "Feeding for Profit in Dairying".

A cooperative shipment was made of one car of cattle, 14 men co-operating.

There is a possibility that the Powell Cooperative Creamery will close December 1. The present manager-buttermaker has not been giving satisfaction so that the business has fallen off to such an extent that he has resigned. So far they have been unable to find a man to take

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Shoshone (continued).

his place. There is a possibility that one of the directors will take charge of the creamery until spring.

Six letters were written to prospective purchasers of stock-hogs. The only offer so far received is \$13 per cwt., f.o.b., but from past correspondence, it is expected that one or two of the men written will bid around \$15 per cwt., f.o.b., Powell. It seems that stock hogs are not moving as easily as they were a while back.

Belle Fourche.

Arrangements were completed during the week ending November 16 to carry out four cooperative hog-feeding experiments this winter. Combinations of home-grown feed-stuffs and products will be used. Buttermilk, ground barley, ground alfalfa, ground and cooked alfalfa, corn, speltz, and a combination of shorts and bran from the local Belle Fourche elevator will be fed. In so far as possible accurate weights and feed records will be kept. These will be the first co-operative feeding experiments conducted on the farms on the Project and the results are looked forward to with much interest.

Tuberculin testing of cattle, with a view to being placed on the Federal and State accredited-herd list, is under way. Dr. A. M. Taylor, cooperating Federal Veterinarian in charge of South Dakota, spent the week on the project. Two herds were tested and four others have signed the articles of agreement preparatory to having their herds tested next week. From indications all breeders of pure breeds will avail themselves of this opportunity.

An eastern alfalfa hay buyer is on the project with four balers and an alfalfa mill. He is paying \$12 per ton for hay in the stack. A large number of farmers are selling their hay at this figure rather than take chances of loss by feeding. Last year a number of feeders lost all their hay and a dollar a head on lambs. Approximately 75 cars of baled alfalfa hay have been shipped to New York, to dairymen mostly. About 12 cars of ground alfalfa have gone to the same markets.

Twelve project farmers loaded 431 hogs at the Newell yards Friday. These hogs averaged 209 pounds, and included stockers, fat hogs and several stags. The smallest consignment was two head and the largest 85 head. The average was 36 head a piece. Most of these hogs were brought from Vale on the lower end of the project, being hauled in wagons and trucks.

Fifteen farm visits were made during the week.

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

North Platte.

During the week ending November 16, assistance was given in bringing to the project one carload of high grade Holstein cattle and one car of Shorthorns for feeding purposes. The Holsteins consisted of 21 cows and a registered yearling Holstein bull. These cattle were selected in Wisconsin by Professor Propps of the Dairy Department at Lincoln. Most of these cattle were purchased by a farmer on the eastern end of the project and six of the cows were purchased by his near neighbors. The Shorthorns were selected out of a bunch of cattle on the dry range.

Considerable work has been done in dairying this week. Assistance was given to two men in replacing some stock cows with dairy cows, and starting them in keeping milk records. Assistance was also given to one man who is starting in the dairy business in a small way by assisting him in buying three dairy cows.

Some gilts for breeding purposes were selected for two men on the project.

The Scottsbluff Creamery and the Morrill Creamery have both stopped making ice cream because they are prohibited from buying more sugar and consequently they are not buying any more whole milk. Most of the farmers who have been selling whole milk to the creameries have bought more hogs to which they are feeding the skim milk, and they are selling the cream at 64 cents per pound. Some cattle are now being bought for the feed lots this winter, but no sheep have been bought as yet. Hey is selling from \$14 to \$16 in the stack.

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WESTERN IRRIGATION AGRI CULTURE

FIELD NOTES.

San Antonio,

During the week ending November 23, the maximum temperature was 77, minimum 34, and greatest daily range 36. The total precipitation was .51 inch. Light frost occurred but did no damage to growing crops.

A fence was constructed around a part of the oats on field D3 to be used in the steer pasturing experiment and the steers were turned in. The oats had made excellent growth and pasturing could have been started earlier, but on account of labor shortage the fence could not be constructed sooner. All sorghum and sudan grass was cut on Thursday. Cotton stalks on the rotation plats were also cut. Wet, cold weather prevented any outside work on Friday and Saturday.

During the week ending November 16, the maximum temperature was 79, minimum 47, and greatest daily range 23. The total precipitation amounted to .91 inch.

Field work was seriously interferred with due to absence of laborers on account of influenza among them and their families. Plats A6-9 and A6-13, in the rotation experiments, were plowed and some plowing was done on field C6. Varietal tests of oats and wheat were seeded on field D3. Field pea varieties were seeded in field A3. Rate of seeding experiments with field peas were seeded on the same field. Oats and field peas seeded on the rotation plats the preceding week emerged the last part of the week. Excellent stands were secured. A small amount of cotton was picked. Bulk oats were seeded on those portions of fields B3 and C3 from which the Johnson grass is being eradicated.

30 November, 1918.

## DEMONSTRATIONS ON RECLAMATION PROJECTS.

## FIELD NOTES.

Shoshone.

During the week ending November 16, 2 farm visits were made, 42 office calls were received and 11 other conferences were held.

Arrangements were made for a cooperative shipment of 2 cars of stock hogs. They are sold at \$15 per cwt., f.o.b. Powell. There was some difficulty in selling these hogs at that price, 2 hog buyers refusing to bid at this time because of unsettled conditions and one bidding \$13 per cwt. There seems to be a general tendency on the part of feeders to delay buying until conditions become more settled.

Two cattle sales were attended. At one of the sales a few cattle were sold, but the prices were unsatisfactory, and the sale was stopped. Some of the farmers were of the opinion that the owner of the cattle had planned to sell off a few of the thin cattle which would not sell well on the market and hold the remainder until they brought a good price. At the other sale the cattle went very cheap but they were not in good condition.

One of the farmers here offered his herd of registered Holsteins for sale. The bull is of excellent breeding and the cows are of fair breeding. This farmer bought these cattle when he filed on his homestead two years ago. He has been unfortunate with his crops and has been buying feed until now he has decided that he cannot afford to keep the cattle longer. He made a great mistake in handling his cattle in that he underfed them so that they were not only kept at a loss but they are in poor condition for future production.

A meeting of the directors of the Powell Breeding Association was held in this office. They decided to keep the man who has been in charge of the stallions throughout the winter. Someone could be hired more cheaply to care for the stallions during the winter, but this man has given such good satisfaction during the past season, that it is hoped to keep him during the next season. A great deal of breeding has been done this fall, largely due to the fact that this man has been willing to go after the mares when the farmer considered himself too busy to leave the farm.

Yakima.

Five calls were answered during the week ending November 16, 15 farm visits were made and 3 office conferences were held. One day was spent in visiting farms on the Sunnyside Unit, Outlook district, to become acquainted with men there.

Mr. Lewis' brood sows, with 15 day old pigs developed several severe cases of udder and digestive trouble while running in an orchard and feeding on alfalfa and cull apples. The local veterinar-

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Demonstrations on Reclamation Projects.  
Field Notes.

Yakima (continued).

ian pronounced the trouble due to apples and said that similar trouble had occurred in the Valley under like circumstances. Three of the affected sows, first litter yearlings, were in especially bad condition. Their udders were badly swollen and inflamed and practically ceased to produce milk. Their appetites were very poor and but little warm skimmed milk and wheat shorts were consumed. The skins thickened and are peeling from the heads and necks at this time. These sows are badly emaciated and have but little strength. The little pigs received a severe check in growth but are making their own way on cow's milk and grain. While apples are evidently unsafe for sows in late pregnancy or while suckling their pigs no trouble has been reported or discovered in Yakima when they were fed to dry sows or growing pigs. Apples are not often fed to cows with success and then usually in small quantities, but a ration of alfalfa hay and apple-pomace is used with evident success.

Three calls for assistance were answered during the week ending November 23, 24 farms were visited and 5 conferences were held.

The present market quotation for prime fat pigs is \$16.50 per cwt. Two herds used in feeding demonstrations, owned by Messrs. Lewis and Beddoe, sold for \$17 and \$16.75 respectively. The Lewis herd will be exhibited in the fat carlot classes at the Lewiston and Portland Livestock Shows, Mr. Lewis to receive a bonus of 10 per cent of the prize winnings. Both herds were grown on alfalfa pasture and field peas. Mr. Lewis hogged off corn with his lot while Mr. Beddoe hand-fed snapped corn in addition to self-feeding ground barley. Data will be completed on these lots shortly after the final weights are taken on delivery to the buyers.

The price offered by condenseries operating in Western Washington for raw milk has an appreciable effect on the supply of milk and cream at cheese factories and creameries in that district, and, by thus affecting the manufacture of butter and cheese, is a determining factor in the Seattle dairy produce prices upon which Yakima prices are dependent. The 1918 price for raw milk can be followed in the following data, which also gives the October 15 prices for preceding years:

1918, November 22.....	\$3.50 per cwt. 3.7 to 4% B.F.
November 1 .....	3.50
October 15 .....	3.30
October 1 .....	3.30

30 November, 1918.

DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Yakima (continued).

1918.	September 15.....	\$3.10 per cwt. 3.7 to 4.00% B.F.
	September 1 .....	3.00
	August 15 .....	2.85
	August 1 .....	2.75
	July 15 .....	2.40
	July 1 .....	2.15
	May 15 .....	2.25
	May 1 .....	2.35
	April 15.....	2.50
	April 1 .....	2.65
	March 15.....	2.75
	March 1 .....	2.90
	February 15.....	3.00
1917	October 15.....	2.75
1916	October 15.....	1.85
1915	October 15.....	1.40
1914	October 15.....	1.65
1913.	October 15 .....	1.65

The cost of hauling, usually from 8 to 10 cents per cwt., is deducted from the quoted price, but the condenseries furnish and operate the hauling service.

North Platte.

The work during the week ending November 23 consisted principally of dairy work. Assistance was given to two men in starting to keep milk records; to another in starting a pit silo, and to another in rearranging his dairy barn. The interest in dairying is gradually growing on the project, not so much in numbers of dairy cows as in a better class of cows, and there seems to have been considerable improvement in the care and management of dairy cattle since a year ago. Quite a few "boarders" have been culled out of dairy herds and shipped to market. The shipment of dairy cows brought in from Wisconsin last week are looking very well now and the owners are pleased with them.

Several farmers have brought cattle in during the past week and a few farmers have brought in sheep. All the stock was bought on the Denver market. The sheep feeders are holding off this year because of the loss they suffered last year, and a large percentage of them will not feed this year. All of the cattle that have been brought in to feed so far are steers weighing 800 to 1000 pounds. They are costing from 10 to 12 cents.

Alfalfa hay dropped about \$2.50 per ton in price locally and is now selling for \$12 to \$13 per ton in the stack. It looks as though this drop in price may encourage the feeding industry.

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WESTERN IRRIGATION AGRICULTURE

FIELD NOTES.

Yuma.

During the week ending November 16, the following temperatures were recorded: Maximum, 85; minimum, 32, and greatest daily range 49.5. A precipitation of .02 inch occurred on November 13.

There was no irrigation this week. The Reclamation Service has cut down the weekly runs of water to an interval of every two weeks, to continue throughout the winter.

Egyptian cotton was picked on fields C27 and D22. Grain sorghums were harvested from fields C22, 23, D38 to 41, and E5 and 6. Additional winter vegetables were planted on the garden plot A14-1 and the garden was hoed and cultivated. The following fallow lands were harrowed and prepared for planting; A12-3, A14-4, and C40 and 41.

A part of the gas system to the farm buildings was taken up and plumbed. The work stock was kept busy most of the week with leveling on the "D" series.

Huntley.

During the week ending November 23, the maximum temperature was 47, minimum -3, and precipitation .3 inch.

Unfavorable weather conditions have made it impossible to work in the fields during practically the entire month. Sugar beet harvest on the project is not completed, and indications are that in several cases it will be impossible to get all of the beets harvested. On the experiment farm, a part of the beets in the beet variety test, Field B-VI, are all that remain unharvested. Threshing on the project is not yet completed and has been affected by the unusually bad weather during November.

Mr. H. P. Davis of the Dairy Division, and Director F. B. Linfield, of the Montana State Experiment Station, were visitors at the experiment farm during the week.

7 December, 1918.

## DEMONSTRATIONS ON RECLAMATION PROJECTS.

## FIELD NOTES.

## Truckee-Carson.

During the week ending November 23, there were received 25 calls for assistance. Visits were made to 9 farms upon request. Two articles were contributed to local papers, one on the cooperative marketing of hogs and one on poor economy of the practice of underfeeding dairy heifers. The latter article was published because of the general practice of underfeeding growing heifers in this vicinity during the past year.

On Monday, a cooperative shipment of one car of fat hogs was marketed under the supervision of this office. Five farmers took part in the shipment. The hogs were marketed in Reno, Nevada. The prices received were 50 cents under San Francisco quotations, which amounted to 16 cents for prime hogs, 15 cents for light hogs and 15 cents for heavy hogs. The shipping expense amounted to 51 cents per hundred.

Another cooperative shipment is planned for the second week in December.

## Shoshone.

During the week ending November 23, 5 farm visits were made, 54 office calls were received, other conferences were held and 2 milk samples were tested.

Two articles were written for the local newspapers, one regarding a cooperative cattle shipment, and one about a cooperative shipment of stock hogs.

Two cars of stock hogs were shipped, 21 men cooperating in the shipment. They were sold for \$15 per cwt., f.o.b., Powell. Another car of hogs is ready for shipment but as yet it has been impossible to obtain a market for them, though one buyer has telegraphed that he might take them at 14 cents about December 10.

Arrangement is being made for a cooperative shipment of a car of cattle. Three other men, each of whom has a carload, have arranged to ship through this office. Cars have been ordered for the first of next week.

The herder for the Shoshone Live Stock Growers Association brought in 54 of the cattle which had strayed enroute from the Forest Reserve range to Powell, and they were distributed to the 10 owners. Several farms were visited to investigate reports of strays. The herder is arranging to make another trip to the mountains in search of other strays. When he returns the Association will settle with him on the basis of the insurance which they carried on the cattle.

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Shoshone (continued).

No difficulty has been found so far in identifying the cattle with the description.

Returns were received on the car of cattle shipped on November 8. Ten cows sold for \$4.60 per cwt. in Omaha. The medium grade of cows for \$6.00 and one cow which was in good condition brought \$8. A calf sold for \$5.50 per cwt. Steers ranged from \$5.25 for small thin steers to \$12 for 3-year-old steers in good condition. The total expense of shipping, not counting shrinkage was 85 cents per cwt. The load was on the road 8 days and was unloaded and fed five times between Powell and Omaha.

Uncompaghre.

Twelve farms were visited during the week ending November 16. Calls were received from 20 sources.

One day was given to assisting the County Agent formulating plans for the Olathe Corn Show.

The Olathe Hog Shipping Association was assisted in finding fat hogs for shipment. This is the second shipment made by this association. Some time was given to the work of getting the business of the bull association block under way. There are 20 members in this block now and 52 shares of stock have been sold.

A call was received regarding a case of sickness among hogs, which was found to be necrotic enteritis.

Considerable time was given toward assembling a shipment of stock for market. Two carloads of cows, bulls and steers belonging to 14 farmers were sent out.

Saturday a trip was made to investigate a case of hog sickness. Fourteen shoats were found sick on one farm and 10 head on two other farms. The symptoms were very much like cholera, and further investigations are being made. Samples of the intestines, heart, lungs, and liver were sent to the laboratory at the Colorado Agricultural College for examination. It is greatly feared that the outbreak is cholera.

Five farms were visited during the week ending November 23 and calls were received from 20 sources.

The greater part of the week was taken up in a trip to Denver to see about the sale of a cooperative shipment of cattle. Fifty-two head, belonging to 14 farmers, were sent out. They were a mixed lot, and some were in poor condition. They were sold separately at the market, prices ranging from \$4.50 to \$11 per hundred. The shipment brought something over \$3,000. Another carload is now ready for shipment in the same way.

7 December, 1918.

DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

Uncompahgre (continued).

There is a severe outbreak of hog cholera on the project around Montrose. There are 25 herds affected and vaccination is going on as rapidly as serum is obtained. There are 4 local veterinarians doing the work. The double treatment is being used. Assistance is being had from Dr. Harrington, U. S. Bureau of Animal Industry, and located in Colorado on hog cholera work. Dr. Wright of the Colorado Agricultural College is also assisting. If serum and virus can be obtained rapidly enough, it is hoped to soon have it under control.

Belle Fourche.

The interest in small herds of pure bred sheep is increasing. Four requests to locate small numbers to start farm flocks were received during the week ending November 23. These requests included Shropshires, Hampshires, and Rambouilletts. Two requests were received for assistance in locating two hundred and fifty and five hundred head of native ewe lambs and yearling ewes, respectively.

On Saturday the temperature went down to 10 degrees below zero. Some loss of fall pigs is expected as a result.

One hundred and twenty-one head of Holstein grade and pure bred cattle were tested for tuberculosis during the past two weeks. This work was done by Dr. Taylor of the U. S. Bureau of Animal Industry. Four reactors and one suspect were found. In every case, with the exception of a pure bred bull, high producing pure bred cows reacted.

14 December, 1918.

## WESTERN IRRIGATION AGRICULTURE.

## FIELD NOTES.

Yuma.

During the week ending November 23, the maximum temperature was 78, minimum 34, and greatest daily range 42.

Six acres were irrigated.

Very little cotton picking was done this week as it seemed well to wait until all bolls were open following the heavy frosts, permitting the remainder of the crop to be harvested in one picking. This condition prevails over the entire project.

Stover yields of grain sorghum varieties from fields D38 to 41 and E5 and 8 were harvested, and also alfalfa from fields B1 to 17.

Four wheat and two barley varieties were planted on plats C37 to 41. An autumn planting of rice was made on plat C36, and Canadian field peas were planted on C32 and 33 in a plat variation test.

One day of the week was spent in making photographs of various crop scenes on the project. Messrs C. G. Marshall and Ralph Beckett, from the Chula Vista station, spent two days here during the week.

During the week ending November 30, the maximum temperature was 76, minimum 27 and greatest daily range 37. A precipitation of .05 inch occurred on November 28.

The alfalfa harvest was completed from plats B1 to 17, C1 to 5, D1 to 9, 11 and 12. The following fallow lands were disked and prepared for planting after having been plowed and irrigated: A4, 6, 7 and 13, and D38 to 41.

Threshing of the various forage and grain sorghum recently harvested was begun.

The epidemic of Spanish influenza among our Mexican laborers and their families has been quite severe for the past two weeks.

During the week ending December 7 the temperatures recorded were as follows: maximum 78, minimum 28, and greatest daily range 43. On Friday night and Saturday .22 inch of rain fell in light showers. This moisture was beneficial to recent seedings of alfalfa, but detrimental to cotton picking. Several additional laborers were secured this week for picking cotton. Three cents per pound is being paid for Durango and five cents per pound for Egyptian cotton.

The threshing of sorghums already harvested was completed.

14 December, 1918

## WESTERN IRRIGATION AGRI CULTURE.

FIELD NOTES.

San Antonio.

During the week ending November 30, the maximum temperature was 62, minimum 29, and greatest daily range 26. Cold, wet weather prevailed throughout the greater part of the week, the total precipitation amounting to .35 inch. The first killing frost of the season occurred on the morning of November 28.

Practically no field work was possible during the entire week. Labor was utilized doing odd jobs. Postholes were dug for constructing a fence around the remainder of the oats to be used in the steer-pasturing experiment. The cotton gin was put in place and ginning of bulk seed of increase progenies and special varieties was completed.

## DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELD NOTES.

Belle Fourche.

During the week ending November 30, by request, one farm was visited on which a number of hogs has recently died. Upon investigation it was found that the young members of the herd were suffering from intestinal necrobacillosis. Several post mortems were held and in each case typical intestinal necrosis was found. The pigs of the herd, numbering approximately four hundred, were put on medical treatment of sulphocarbonates. Mixed bacterins will be used if improvement is not shown.

Milk and butterfat tests were made on the pure bred Holstein herd of Mr. J. R. Beresford, near Newell, during the past week. Arrangements for testing this herd every month for several months were made. Results relative to the individual cattle will be checked and conclusions reached in the spring.

A portable hog crate was built during the week. A photo, sent from the Washington, of a similar crate used on the North Platte project was used as a guide. It was so constructed as to make the removal of all of the rods holding it together unnecessary. Only two rods are removed, the top and one side folding together and the bottom and the other side folding together. This enables one to handle two parts of the crate at one operation. In addition it is easier to assemble and can be set up and taken down very quickly. The total weight of the crate is 160 pounds.

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Belle Fourche (continued).

A cooperative farm hog-feeding experiment was begun on Monday of the week ending December 7. Twelve barrows, averaging 164.3 pounds, were weighed and put on a ration of ground barley in a self-feeder and alfalfa hay. As soon as procurable ground alfalfa will be used instead of the stack-hay. The ground alfalfa also will be used and fed in a self-feeder.

One farmer was assisted in the selection of three pure bred Duroc-Jersey gilts. This gentleman is establishing a pure bred herd. Assistance is also being rendered this farmer in obtaining a pure-bred herd of farm sheep.

A recent observation made in the Vale district on the lower end of the project, the oldest part of the project, is that the farmers are practically all using and demanding pure-bred boars, and there is a strong tendency to establish pure bred herds. The demand for good pure-bred boars is much greater than the supply.

Assistance was rendered one farmer in the selection of two Corriedale bucks for use on one hundred selected native ewes of rather mixed breeding. The price of these bucks was \$175 each. The number of Corriedale bucks being used by project farmers and range sheep men this fall should give by next spring, a rather clear insight into the merits of this breed and its future in this section. This information should be available partly at lambing time and partly about August 1 when lambs are marketed.

Shoshone.

During the week ending November 30, 6 farm visits were made, 35 office calls were received and 1 other conference was held.

A cooperative shipment was made of 3 cars of cattle, 5 men co-operating in the shipment. One farmer was assisted in the purchase of a registered Holstein bull.

Mr. E. T. McDermott from the Huntley Project, visited this project to look at some registered Holstein heifers which are for sale, but no deal was concluded while he was here. This office got in touch with Mr. McDermott through Mr. Dan Hansen, superintendent of the Huntley experiment farm.

Over a carload of stock hogs have been listed for sale with this office but no market can be found at present, the men with whom correspondence has been carried on seem to be waiting for a drop in the market.

Eight men were taken out on the range to see some breeding ewes which are for sale. No purchase was made but it is likely that 4 of the men will buy about 50 head each, to be kept on their farms through the year.

14 December, 1918.

DEMONSTRATIONS ON RECLAMATION PROJECTS.  
Field Notes.

## Uncompahgre.

The entire week ending November 30 was taken up with the hog cholera control work, Dr. George A. Wright, Extension Veterinarian of the Bureau of Animal Industry assisting in the work. Thirty farms were visited and 80 calls were received from various sources.

Sixteen infected herds have been reported to date and losses are about 225 head. The heaviest losses occurred on four farms. The disease is fairly well under control at present.

The plan used was to form a cholera control council composed of local veterinarians, county agents, Bureau of Animal Industry veterinarians, and Mr. Lindgren. All four of the local licensed veterinarians were interested in the work and all of the vaccination was done by them. The disease is still confined to a comparatively small area. The simultaneous treatment only is being used.

The work of this office, in cooperation with the Bureau of Animal Industry veterinarian, Dr. Wright, has been to organize the territory. Patrolmen are named in each district and they report to this office any cases of sickness, which are promptly looked into. In this way the territory infected is well in hand. The local veterinarians report each evening and are given their work for the next day. In this way the sick herds are treated first and then the herds nearest them are taken care of by vaccination. Nearly one-half of the herds are either vaccinated or are on the list for vaccination at once. The farmers generally are listing their herds for vaccination. The plan is to use the veterinarians to the best advantage so as to control the disease.

Another shipment of cattle was sent out during the week. There are several animals listed for another carload. The farmers report that they are receiving from \$7 to \$10 per head more than was offered them at home.

## North Plate.

During the week ending November 30, 10 farm visits were made and 3 office conferences were held. One farmer was assisted in filling a silo with corn fodder that has been previously cut and shocked and another was assisted in making some changes in his dairy barn. In one herd of dairy cattle some of the "boarders" were culled out and shipped to market, and two good dairy cows were bought in their place. Assistance was also given to another farmer in buying three dairy cows.

A sale of some Jersey cattle was attended during the week. The cattle were sold for a low price due to the fact that they had not been well cared for and were in a thin condition. This stuff was mostly yearlings and two-year-olds. The former averaged about \$35 per head and the latter about \$50 per head. Jersey cattle on the project are

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

North Platte (continued).

not as popular as the Holsteins or the Shorthorns. A number of the farmers are favoring the Shorthorns because they can use them for dairy cattle through the winter, raising the calves by hand and turn the cows dry and put them on dry land pasture the summer, thus allowing them more time for farm work during the farming season.

The herd of Holsteins which was brought from Wisconsin last month is giving a good account of itself. While only a few of them have freshened the others are showing up well and promise to be good dairy cows.

Assistance was given one man this week in starting official testing. This man has a herd of Holsteins, some grade and some pure breds, the intention being to eventually to have only pure breds.

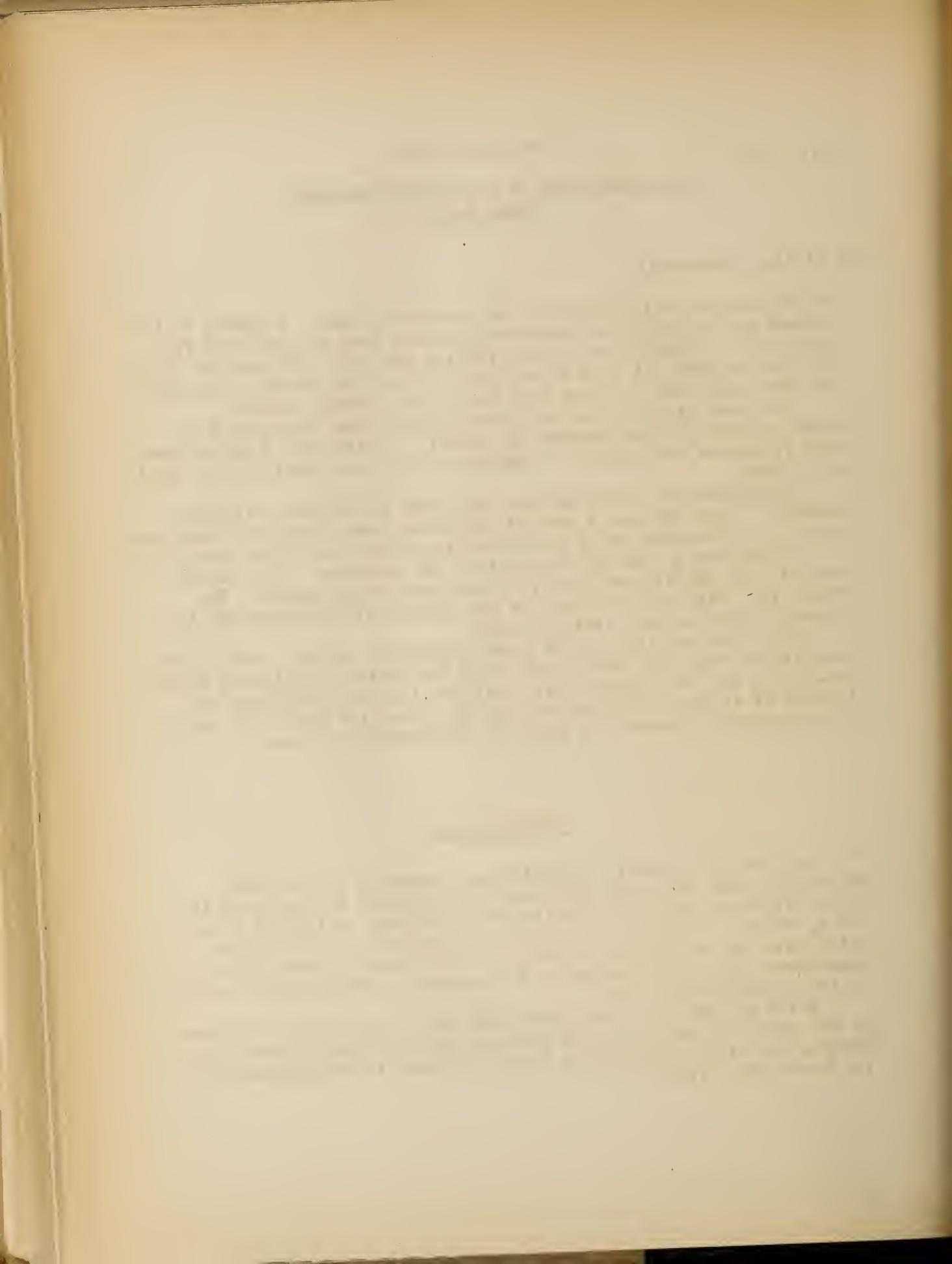
On Saturday a sale of stock cattle was attended. The cattle were of fair quality and sold for less than market price. The demand for this class of stock on the project is very poor and the tendency seems to sell instead of buy.

Owing to inability of the local creameries to buy a sufficient quantity of sugar for making ice cream they have discontinued buying whole milk and the farmers previously selling whole milk are now feeding it to their pigs and selling the cream for which they have been receiving 65 cents per pound of butter-fat this week.

MISCELLANEOUS

Mr. Roscoe E. Blair, formerly Superintendent of the Yuma Experiment Farm, has been appointed Agriculturist in Charge of the Office of Demonstrations on Reclamation Projects, effective December 1, 1918. It is probable that Mr. Blair will remain at Yuma until later in the winter to finish up the season's work at the experiment farm before coming to Washington to assume active charge of the demonstration work.

Until Mr. Blair reaches Washington and takes up the direction of the work, Mr. Scofield will continue as Acting Agriculturist in Charge, and all correspondence should continue to be addressed to the Washington office.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

FIELDNOTES.

Umatilla.

For the month of November, Mr. Allen reports as follows:

"Mild weather prevailed during the month and good progress was made in land development. Work was pursued on numerous small areas, and considerable rye and a small amount of alfalfa was sown. A high class of work is being done which indicates that most farmers have acquired a full appreciation of the relation of properly prepared land to economy of water and labor in irrigation.

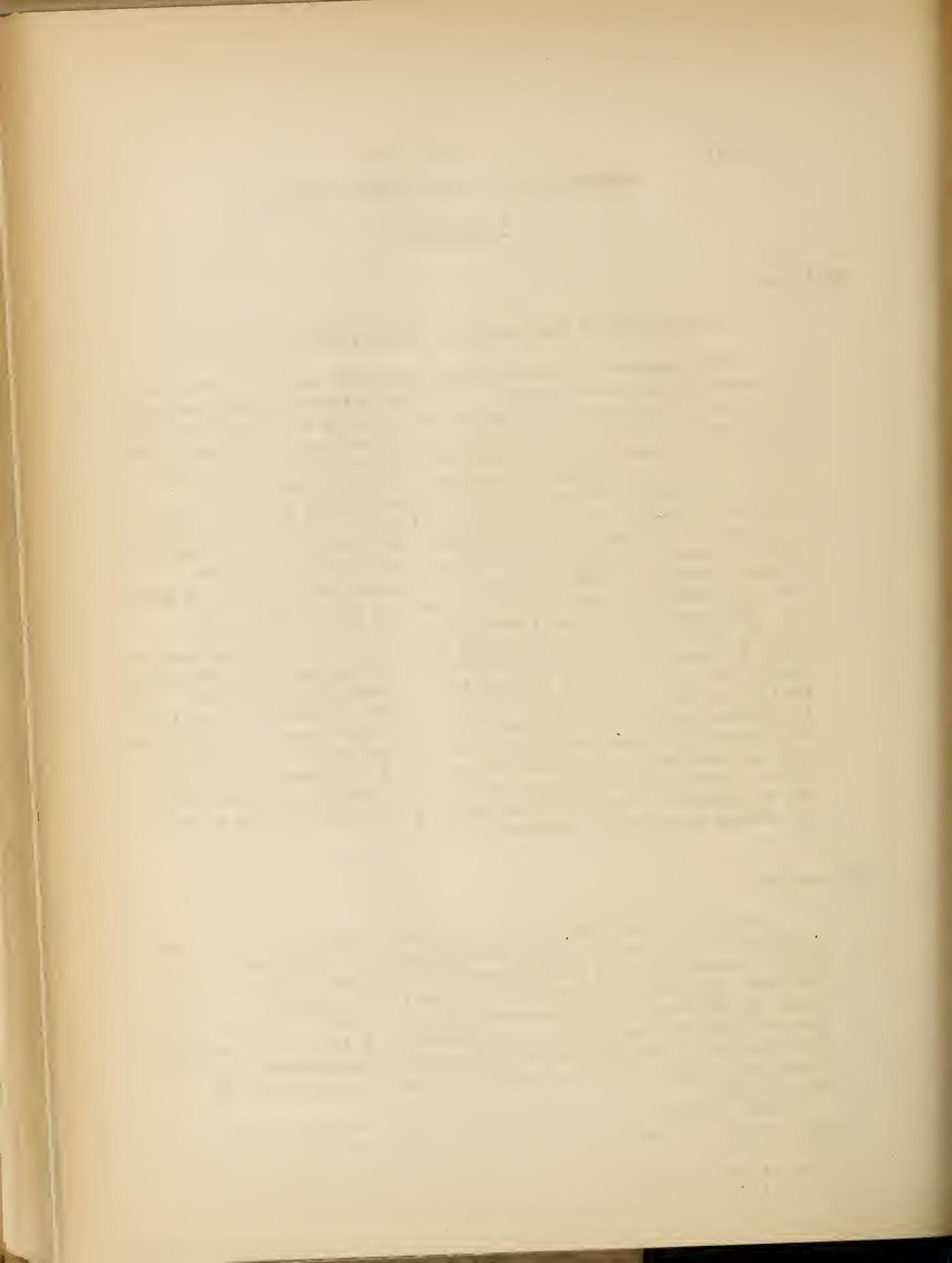
"Two severe windstorms caused slight damage to newly graded land not protected by a covering of straw. The available supply of straw and damaged hay is inadequate to cover the land that is being graded. This might result in loss from wind erosion. However, continued warm weather has caused a rapid growth of late-sown rye that will soon be large enough to protect the land.

The price of hay has risen from \$21 to \$24 on board cars. This is \$1 per ton below the price at which it sold before the decline in October. The alfalfa seed crop amounted to approximately 34,500 pounds. In 1917 it amounted to about 15,000 pounds. This seed is taken from portions of fields where the stand is too thin to produce heavy yields of hay, and from ditch banks and fence rows. High yields and good prices have created an interest in alfalfa seed production that promises to develop a substantial industry. It is a promising enterprise for the light soils upon which seed can be produced with a much higher duty of water than is required to produce satisfactory yields of hay."

Uncompahgre.

The entire week ending December 7 was taken up with the hog cholera control work. Twenty-one farms were visited and sixty calls for services and information were received. The disease has been checked in the vicinity of the first outbreak. No new cases of importance were reported during the week. There were several new herds vaccinated as a result of a few suspicious cases. The results of the vaccination are proving satisfactory, although there is a great deal of complaint concerning the charge for vaccinating.

New outbreaks of the disease are being watched for and whenever there is a case of sickness among hogs reported it is promptly looked into. Dr. C. A. Wright, Extentions Veterinarian, Bureau of Animal Industry, has been on the work nearly all week but was called away for a few days the latter part of the week. It



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Field Notes.

Uncompahgre (continued).

is expected that he will return on Tuesday of next week. The co-operative work being done between agriculturists on the project and the veterinarians has in most cases been satisfactory.

Truckee-Carson.

For the week ending December 7 considerable time was devoted to arrangements for cooperative marketing of hogs. A shipment of two carloads has been arranged to leave the project soon after the 15th. of the month. They will probably be shipped to San Francisco. Inquiries, however, will be sent out in order to determine the most advantageous market. The San Francisco quotation for prime hogs is at present 16-1/2 cents.

Assistance was rendered during the week in the selection of a herd bull and in the selection of a foundation herd of Holsteins. Through the efforts of this office, the prospective buyer was persuaded to buy only subject to tuberculin test.

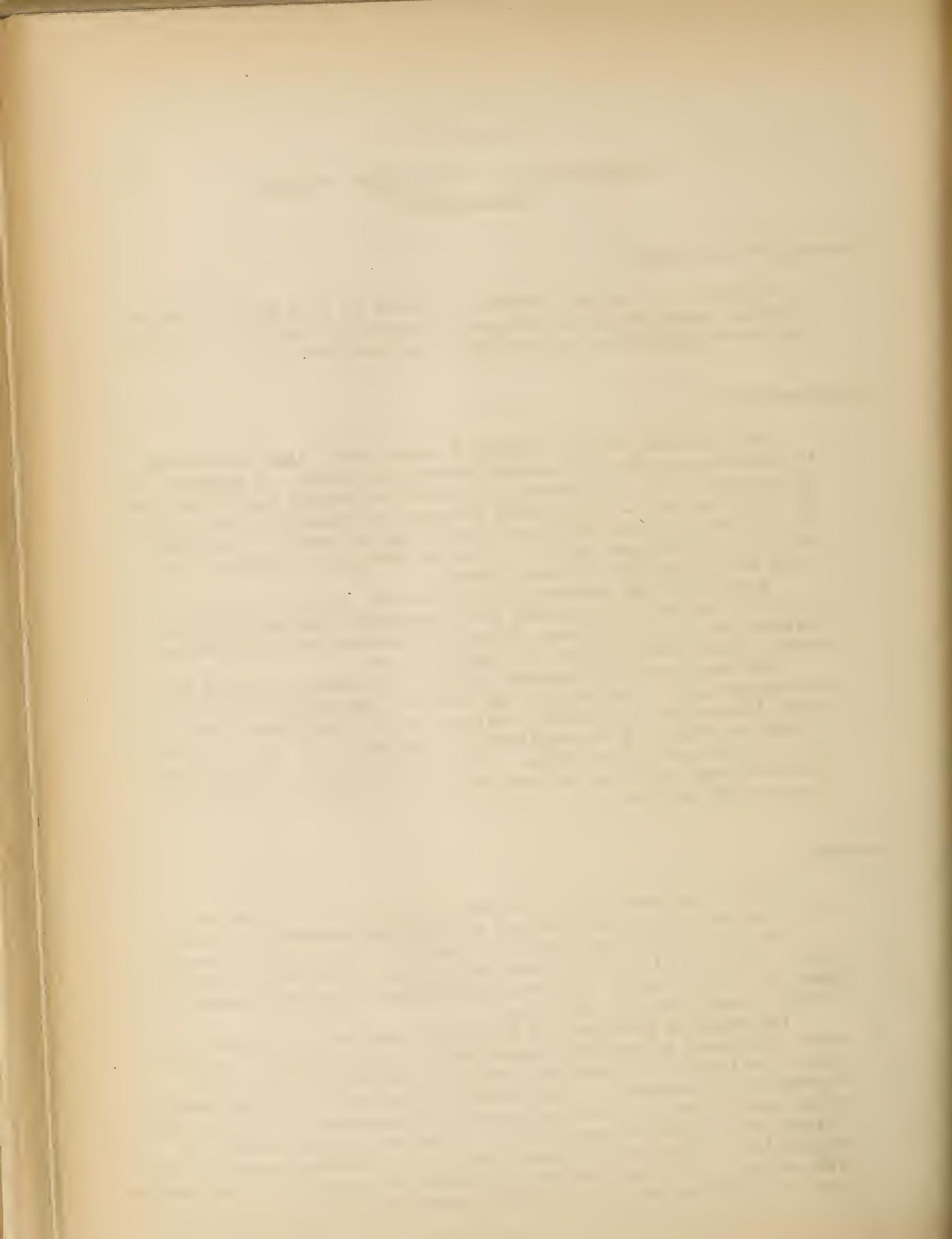
The sentiment for dairying is fast regaining the ground lost two months ago. Much of the hay that was purchased by cattle and sheep feeders in this valley, will not be fed this season unless it is shipped away. This condition is reported to be due to a shortage of stock cattle and sheep. Fifteen dollars in the stack is the prevailing price at the present time. Barley is commanding a price of \$50 per ton.

Shoshone.

During the week ending December 7, one farm visit was made, 29 office calls were received and 8 other conferences were held.

Four project farmers were accompanied to the range and assisted in the selection of 200 ewes, which they picked out of the band, at \$12 per head. The ewes were selected for good mouths, good udders, good flesh and good size.

The Board of Directors of the Powell Cooperative Creamery voted this week to use the creamery as a cream station for a short while, in the hope of finding a good buttermaker. One of the directors had planned to start making butter when the former buttermaker quit December 1, but as some of the machinery is in poor condition, this director decided that he did not care to assume the responsibility for making butter, but he is receiving cream for the time being. Now that the labor situation is improving it is thought that it might be possible to obtain a buttermaker.



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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Shoshone (continued).

Returns were received on one of the cars of cattle sold in Omaha December 5. Cows sold for \$5.50 to \$7.25 per cwt. Fairly good steers sold for \$9 to \$10 per cwt.

North Platte.

During the week ending December 7, 13 farms were visited relative to live stock work. There were seven office conferences and 12 bulletins were given out at the request of farmers.

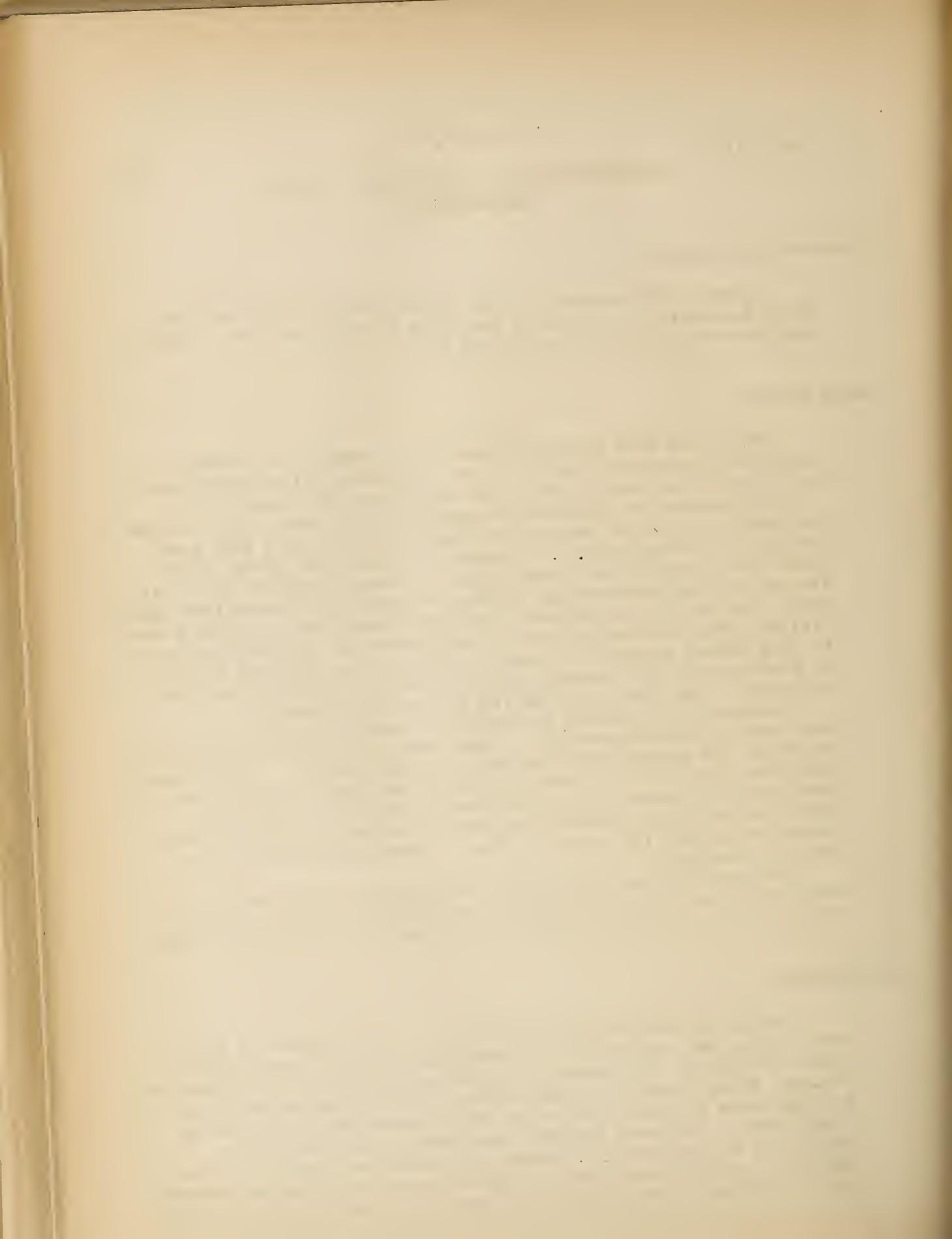
One farmer was assisted in starting a pit silo, which will be completed this winter but probably not be filled until next year. This silo is being built in a gravel hill where the gravel is so loose that the walls will not stand. A wooden form was put in at the top and the concrete set in this, making a wall about five inches thick and which is reinforced with heavy woven wire. These forms will be moved down as the hole is dug deeper and the concrete above is hard enough to move the forms. This man has not been in favor of a silo until just recently and is putting this one in as an experiment. The silage will be fed to a herd of Jerseys.

Several large bunches of lambs were brought on the project this week for winter-feeding. These lambs are all western and were bought on the western range and on the Denver market. The prices paid were from 11 to 13 cents per pound, the lambs averaging in size from 55 to 65 pounds. A few bunches of thin cows, which were bought on the Denver market were brought on the project this week to be fed through the winter. Most of these cattle will be fed beet tops and hay.

The price of hay locally has advanced about \$2.00 during the week, - any good bright alfalfa now selling for from \$14 to \$15 in the stack, and from \$17 to \$18 delivered at the local alfalfa mill.

Belle Fourche.

During the week ending December 14, a trip was made to Deadwood, S. D., for the purpose of conferring with the Forest Supervisor relative to the results of the sheep grazing experiment on the National Forest during the past season. Sixty-two hundred sheep were run on a selected part of the forest range this year for the first time. The owner reported considerable loss due to the scattering of the sheep, the woods and underbrush preventing close herding. Approximately one hundred sheep are still on the reserve, and, according to the herder, will have to be shot if they are ever



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Field Notes.

Belle Fourche (continued).

recovered, as they are as wild as deer.

There are several contributing factors entering into the cause of this loss. Chief among these are; first, the inexperience of the herder in the wooded territory; second, the prejudice of the ranchers on the reserve to sheep; and third, the fact that the water holes were mostly near the ranch homes, which caused trouble with the ranchers.

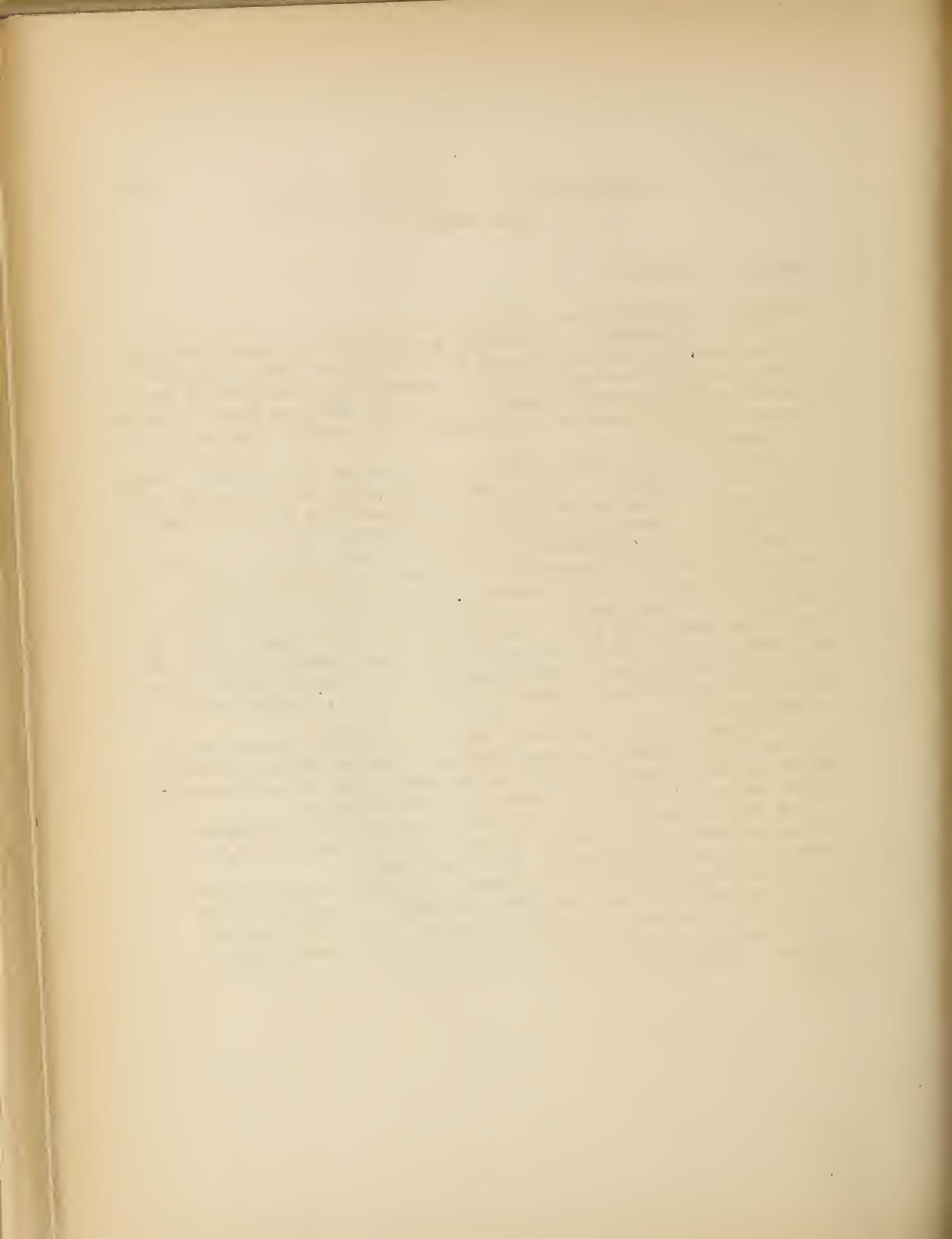
The majority of the ranchers on the reserve run cattle. Very few of them own sheep. Hence they do not wish sheep to be brought on the range. Instead of rendering assistance to the herder in locating stray sheep they are more apt to hinder him.

According to the Forest Supervisor the easy solution of the difficulty would be to encourage the ranchers to replace their cattle with sheep. This, however, was pointed out as a remote possibility of execution. The same land will be opened to the same sheep owner next year. With the experience gained during the past season losses should be materially reduced another year. The causes of friction with many of the ranchers is being smoothed out and a more satisfactory season in many respects is being looked forward to.

The sheep grazing territory on the Black Hills forest range will be largely increased next year and a correspondingly larger number of sheep grazed. The results should give an indication of future use of this range for sheep grazing purposes.

A coyote hunter has been appointed by the U. S. Biological Survey to serve this county. His work will be largely on the eastern end of the project and adjoining range.

Assistance was rendered a farmer entering the dairy business in the selection of pure bred Holstein bull. Records on both sides show 14 pounds butter-fat per week. This bull was purchased for \$85. He will be used jointly by two neighboring farmers. Shortage of capital prevented selection of a better bull.



28 December, 1918.

## WESTERN IRRIGATION AGRICULTURE.

## FIELD NOTES.

San Antonio.

During the two weeks ending December 1+, the maximum temperature was 80, minimum 27, and greatest daily range 41. The precipitation amounted to .74 inch. Moderate temperatures prevailed during most of this period. Fall seeded crops made good growth.

The last soil samples for the season were taken. Sorghum and Sudan grass hay was hauled in from the rotation fields. Cotton stalks on the rotation plats were raked and burned. All but two of the cotton plats in the rotation experiments were plowed. Some plats on which a good deal of volunteer oats were coming up were disced, with little adverse effect on the oats, however, due to the plentiful moisture supply and the damp weather.

Cotton on A<sub>5</sub>-8, C<sub>4</sub>, C<sub>5</sub> and on the Herbst field was picked. Castor beans on B<sub>4</sub> were harvested. Two seedings of flax were made in the date of seeding test on C<sub>3</sub>.

The fence around the steer pasture on C<sub>4</sub> was taken down and the fencing of the pasture on D<sub>3</sub> was completed. The gate at the main entrance was repaired.

One man has spent most of his time in working up gin samples from the rotation plats. Considerable time was spent in cleaning and straightening up around the buildings and lots.

28 December, 1918.

## DEMONSTRATIONS ON RECLAMATION PROJECTS.

## FIELD NOTES.

## Uncompahgre.

During the week ending December 14, 11 farm visits were made and calls were received from 30 sources. Conferences were held with 10 other men.

The hog cholera is pretty well checked, -there being but one outbreak during the week. There has been considerable vaccination done on the project. As the situation is at present so many of the herds have been vaccinated that it will be easier to check any minor outbreaks. Up to date there have been losses amounting to 300 head out of an estimated population of 10,000 hogs.

Some work has been done during the week getting another shipment of cattle together for cooperative shipment. There are 49 animals listed at present. It is planned to get them out the first of next week. It is rather hard to get cars when wanted. There have been many heavy shipments to market of late, due to the high prices asked for hay.

## North Platte.

During the week ending December 14, 5 farms were visited at the request of the owners, and 19 farms were visited for general live-stock work. On one dairy farm assistance was given in putting in the forms and erecting a hoist for a pit silo, and at another dairy farm assistance was given in putting in stanchions and concrete floor and gutters. Two herds of calves were treated during the week for pinkeye. In one of these herds the disease had gone so far that some of the calves had become blind in one eye, due to the pupil of the eye bursting. The sick calves were taken away from the others and put in a dark barn and the eyes washed once daily with a strong solution of boric acid. By the last of the week the calves were recovering. Several "boarders" were culled out of one dairy herd during the week and all sold at public auction as dry cows for feeding tops.

Two herds of hogs were inspected this week for cholera but no signs of cholera were found. Both herds were badly infected with worms because of being kept in close unsanitary quarters.

A few more carloads of stock cows and steers were brought onto the project this week for feeding beet tops and pulp during the winter, also a few cars of sheep. The latter, however, are not being fed to the extent that they were here a year ago. Most of the farmers are more or less skeptical about the profits in feeding sheep this winter.

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DEMONSTRATIONS ON RECLAMATION PROJECTS.

Field Notes.

Yakima.

Two calls for assistance were answered during the week ending November 30, 13 farms visits were made and 7 office conferences were held.

The weather continues open and farm work is progressing in a very good manner. The sugar beet harvest is practically finished; potatoes are in pits or warehouses or have been marketed; much of the baled hay has been moved, and the apple crop has moved to central warehouses or to market. Fall plowing is progressing nicely and the open weather has permitted maximum grazing of hay and grain stubble fields.

Dairy prices are being maintained at a high level. A recent dairy auction held by Charles Fischer at Puyallup realized the best prices reported this year. One grade Holstein sold for \$345. Six other cows brought over \$300 each. The lowest price, \$165, was paid for a short two-year-old carrying a calf.

Belle Fourche.

A second hog-feeding experiment was started during the week ending December 21. Seventy-two hogs, averaging 72 pounds in weight, were placed on feed consisting of ground barley fed in self-feeders, thira cutting alfalfa hay fed in racks and buttermilk from the local creamery. One disappointing feature is the failure to furnish a consistent quantity of buttermilk every day. If an alfalfa mill can be secured, the alfalfa will be ground and fed with the ground barley.

The returns of the seasons sugar beet industry have just become available. This year the Belle Fourche Valley marketed 175,176 tons of beets from 1,622 acres planted. The sugar content ranged from 14.6% to 20%. From this tonnage the farmers realized \$157,608. Valuing the tops at \$10 per acre the total returns realized by the farmers was \$173,828.

The above results were obtained notwithstanding the fact that much damage was done by the beet web worms, which in some instances ate the leaves of the beets to the surface of the ground.

One farmer on 36 acres harvested 720 tons of beets or 20 tons to the acre. This field brought \$6,480 and the beet tops being sold for \$10 per acre added \$360 which brought the total returns for the 36 acres to \$6,840 or \$190 per acre.

Assistance was rendered one farmer in the selection of a pure bred Holstein bull from the M. J. Smiley herd.

Two young farmers, just entering the sheep business, were assisted in the purchase of 150 ewes. These consisted mostly of

28 December, 1918.

DEMONSTRATIONS ON RECLAMATION PROJECTS

Field Notes.

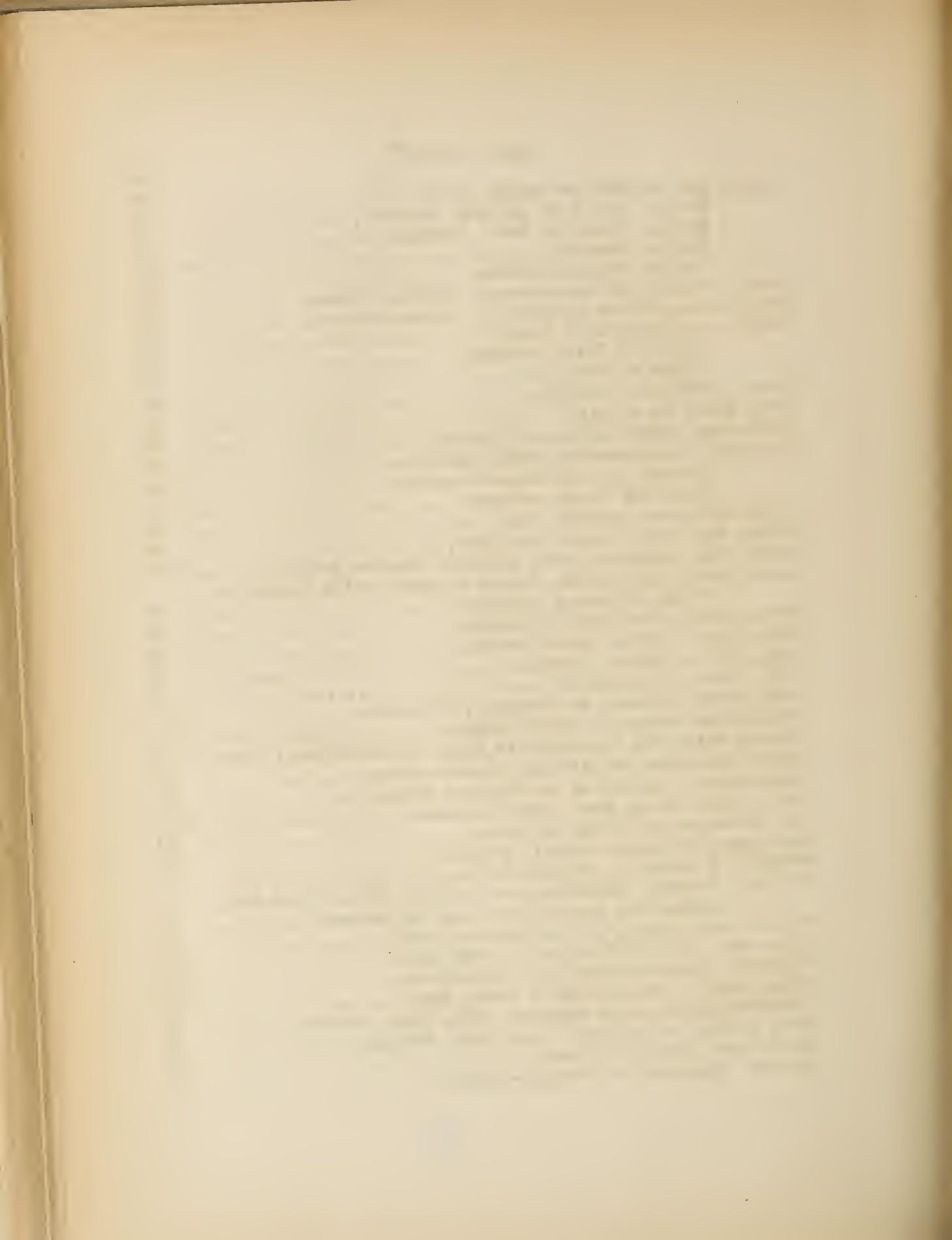
Belle Fourche (continued).

aged animals most of which were not suited for range purposes another year. They obtained the ewes for \$10 per head. It was thought advisable to suggest to them to gain their experience with older ewes and after two seasons lambing begin with younger ewes.

Yearling ewes were priced at \$20 and twos and threes for \$17.

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